

# **WATER SERVICE AND USE RULES AND REGULATIONS**

**CITY OF SANTA CLARA**

---



## TABLE OF CONTENTS

<b>1. GENERAL STATEMENT AND DEFINITIONS .....</b>	<b>1</b>
<b>1.A ESTABLISHMENT OF RULES AND REGULATIONS .....</b>	<b>1</b>
<b>1.B GENERAL STATEMENT.....</b>	<b>1</b>
<b>1.C WATER USE RESTRICTIONS AND PROHIBITIONS .....</b>	<b>2</b>
<b>1.D INCORPORATION OF MUNICIPAL SERVICES DIVISION RULES AND REGULATIONS .....</b>	<b>2</b>
<b>1.E DEFINITIONS.....</b>	<b>2</b>
<b>2. NOTICES .....</b>	<b>6</b>
<b>2.A NOTICES TO THE CUSTOMER .....</b>	<b>6</b>
<b>2.B NOTICES TO THE CITY .....</b>	<b>6</b>
<b>3. CONTRACTS .....</b>	<b>7</b>
<b>4. APPLICATION FOR WATER SERVICE .....</b>	<b>8</b>
<b>4.A SERVICE ORDER APPLICATIONS .....</b>	<b>8</b>
<b>4.B CHANGES IN WATER SERVICE.....</b>	<b>8</b>
<b>5. RATES .....</b>	<b>9</b>
<b>5.A RATES .....</b>	<b>9</b>
<b>5.B TEMPORARY RATE SCHEDULE .....</b>	<b>9</b>
<b>5.C ESTABLISHMENT OF NEW OR OPTIONAL RATES .....</b>	<b>9</b>
<b>5.D REASSESSMENT OF RATE SCHEDULE QUALIFICATION .....</b>	<b>9</b>
<b>5.E SERVICE BY FACILITIES PURCHASED FROM OTHER UTILITIES.....</b>	<b>9</b>
<b>6. METER TEST AND ADJUSTMENT OF BILLS FOR METER ERROR .....</b>	<b>10</b>
<b>6.A METER TEST .....</b>	<b>10</b>
<b>6.B METER TEST - CUSTOMER REQUEST .....</b>	<b>10</b>
<b>6.C ADJUSTMENT OF BILLS FOR METER ERROR .....</b>	<b>10</b>
<b>7. APPEAL FROM THE APPLICATION, REQUIREMENTS, OR INTERPRETATION OF THESE RULES AND REGULATIONS .....</b>	<b>12</b>
<b>8. CITY DISTRIBUTION SYSTEM ON CUSTOMER PREMISES.....</b>	<b>13</b>
<b>8.A NEW DEVELOPMENTS .....</b>	<b>13</b>
<b>8.B RELOCATION OF EXISTING FACILITIES .....</b>	<b>13</b>
<b>8.C RIGHTS OF WAY.....</b>	<b>13</b>
<b>9. ACCESS, INTERFERENCE, TAMPERING, AND THEFT .....</b>	<b>14</b>
<b>9.A CITY RIGHT OF ACCESS.....</b>	<b>14</b>
<b>9.B WORK OUTSIDE CITY'S OPERATING CONVENIENCE .....</b>	<b>14</b>
<b>9.C INTERFERENCE.....</b>	<b>14</b>
<b>9.D TAMPERING .....</b>	<b>14</b>
<b>9.E FRAUD .....</b>	<b>15</b>
<b>9.F LIABILITY, PENALTY, PROSECUTION AND PUNISHMENT FOR VIOLATION .....</b>	<b>15</b>
<b>9.G CIVIL ACTION.....</b>	<b>15</b>
<b>10. TEMPORARY WATER SERVICE.....</b>	<b>16</b>
<b>10.A TIME LIMIT .....</b>	<b>16</b>
<b>10.B CHARGE FOR WATER SERVED .....</b>	<b>16</b>
<b>10.C INSTALLATION CHARGE AND DEPOSITS .....</b>	<b>16</b>
<b>10.D REFUNDS .....</b>	<b>16</b>
<b>10.E TEMPORARY WATER PERMIT .....</b>	<b>17</b>
<b>11. SHORTAGE OF SUPPLY AND INTERRUPTION OF DELIVERY .....</b>	<b>18</b>
<b>12. DESCRIPTION OF STANDARD WATER SERVICE.....</b>	<b>19</b>
<b>12.A NUMBER OF SERVICES TO SEPARATE PREMISES .....</b>	<b>19</b>
<b>12.B SERVICE TO MULTIPLE UNITS.....</b>	<b>19</b>
<b>12.C SINGLE METER SERVICE TO MULTIPLE TENANTS/UNITS .....</b>	<b>19</b>
<b>13. RESPONSIBILITY FOR EQUIPMENT AND PROTECTIVE DEVICES .....</b>	<b>21</b>
<b>13.A RESPONSIBILITY FOR EQUIPMENT.....</b>	<b>21</b>
<b>13.B PROTECTIVE DEVICES .....</b>	<b>21</b>

<b>14. SERVICE CONNECTIONS AND METERS.....</b>	<b>23</b>
<b>14.A SERVICE CONNECTIONS.....</b>	<b>23</b>
<b>14.B METERS .....</b>	<b>23</b>
<b>14.C CHANGES IN LOCATION OF METERS AND SERVICE CONNECTIONS.....</b>	<b>23</b>
<b>14.D CHANGES IN SIZE OF METER.....</b>	<b>23</b>
<b>14.E OWNERSHIP .....</b>	<b>24</b>
<b>14.F MAINTENANCE.....</b>	<b>24</b>
<b>14.G SPLIT SERVICE CONNECTIONS.....</b>	<b>24</b>
<b>15. MAIN EXTENSIONS.....</b>	<b>25</b>
<b>15.A EXTENSIONS.....</b>	<b>25</b>
<b>15.B RIGHT TO CHANGE POLICY .....</b>	<b>25</b>
<b>16. AUTOMATIC FIRE SERVICE .....</b>	<b>26</b>
<b>16.A PURPOSE.....</b>	<b>26</b>
<b>16.B REQUEST AND APPLICATION.....</b>	<b>26</b>
<b>16.C INSTALLATION CHARGES .....</b>	<b>26</b>
<b>16.D QUANTITATIVE CHARGES .....</b>	<b>26</b>
<b>16.E VIOLATION OF AGREEMENT.....</b>	<b>27</b>
<b>16.F OWNERSHIP OF CONNECTION.....</b>	<b>27</b>
<b>16.G PRESSURE AND SUPPLY .....</b>	<b>27</b>
<b>16.H RATES.....</b>	<b>27</b>
<b>17. FIRE HYDRANTS.....</b>	<b>28</b>
<b>17.A USE OF AND DAMAGE TO FIRE HYDRANTS.....</b>	<b>28</b>
<b>17.B INSTALLATION OF FACILITIES ON PRIVATE PROPERTY.....</b>	<b>28</b>
<b>17.C MARKING OR COLOR CODING OF HYDRANTS.....</b>	<b>28</b>
<b>17.D MODIFICATION OR RELOCATION OF FIRE HYDRANTS.....</b>	<b>28</b>
<b>17.E WATER FROM FIRE HYDRANTS .....</b>	<b>29</b>
<b>18. POOLS AND TANKS.....</b>	<b>31</b>
<b>19. CONTROL VALVES .....</b>	<b>32</b>
<b>20. CROSS CONNECTIONS.....</b>	<b>33</b>
<b>20.A HEALTH REGULATIONS .....</b>	<b>33</b>
<b>20.B CITY REQUIREMENTS.....</b>	<b>33</b>
<b>20.C APPROVED BACKFLOW PREVENTION DEVICES .....</b>	<b>33</b>
<b>20.D PLUMBING CHANGES REQUIRED .....</b>	<b>33</b>
<b>20.E RELIEF VALVE REQUIRED .....</b>	<b>34</b>
<b>20.F BACKFLOW PROTECTION ON ADDITIONAL WATER SUPPLY LINES.....</b>	<b>34</b>
<b>20.G INSPECTION OF BACKFLOW PREVENTION DEVICES .....</b>	<b>34</b>
<b>20.H INSTALLATION OF BACKFLOW PREVENTION DEVICES.....</b>	<b>34</b>
<b>20.I INSTALLATION OF FACILITIES ON PRIVATE PROPERTY.....</b>	<b>35</b>
<b>20.J REMOVAL OR MODIFICATION OF BACKFLOW PREVENTION DEVICES .....</b>	<b>35</b>
<b>20.K DISCONTINUANCE OF SERVICE FOR DEFECTIVE APPARATUS.....</b>	<b>35</b>
<b>21. RECYCLED WATER USE .....</b>	<b>36</b>
<b>21.A ABBREVIATIONS.....</b>	<b>36</b>
<b>21.B DEFINITIONS.....</b>	<b>37</b>
<b>21.C SUMMARY OF ON-SITE INSTALLATION REQUIREMENTS .....</b>	<b>40</b>
<b>21.D FEES AND LICENSE .....</b>	<b>43</b>
<b>21.E THE CITY AS THE LOCAL AUTHORITY .....</b>	<b>43</b>
<b>21.F AUTHORIZED USES FOR RECYCLED WATER.....</b>	<b>44</b>
<b>21.G NON-APPROVED USE AREAS.....</b>	<b>44</b>
<b>21.H AMENDMENTS .....</b>	<b>45</b>
<b>21.I PROTECTION OF PUBLIC HEALTH.....</b>	<b>45</b>
<b>21.J RIGHT TO TERMINATE SERVICE .....</b>	<b>45</b>
<b>21.K SEVERABILITY .....</b>	<b>45</b>
<b>22. DESIGN, INSTALLATION AND INSPECTION OF SYSTEMS FOR USE OF RECYCLED WATER .....</b>	<b>46</b>
<b>22.A DESIGN APPROVAL.....</b>	<b>46</b>
<b>22.B REQUIRED ON-SITE RECYCLED WATER SERVICE PLANS.....</b>	<b>46</b>

---

TABLE OF CONTENTS WATER SERVICE AND USE RULES AND REGULATIONS

City Council Resolution # 7083 (11/04/03)

Latest Revision: 11/3/03

22.C	BASIS FOR DESIGN REVIEW CRITERIA.....	47
22.D	SUMMARY OF DESIGN REVIEW CRITERIA.....	48
22.E	PRELIMINARY CROSS-CONNECTION TEST EXISTING SITES.....	50
22.F	CONSTRUCTION INSPECTION.....	50
22.G	FIELD TESTING AND INSPECTION.....	51
22.H	TEMPORARY CONNECTION TO POTABLE SERVICE.....	51
22.I	FINAL CROSS-CONNECTION TEST.....	51
22.J	FINAL INSPECTION.....	52
22.K	FINAL APPROVAL.....	53
22.L	RECORD DRAWINGS.....	53
23.	OPERATION AND MAINTENANCE OF SYSTEMS FOR USE OF RECYCLED WATER.....	54
23.A	CONDITIONS OF SERVICE.....	54
23.B	SYSTEM RESPONSIBILITY.....	54
23.C	HOURS OF OPERATION.....	55
23.D	DESIGNATION OF CUSTOMER SUPERVISOR.....	55
23.E	PERSONNEL TRAINING.....	55
23.F	VEHICLE IDENTIFICATION.....	56
23.G	MAINTENANCE.....	56
23.H	ANNUAL SELF-INSPECTIONS AND REPORTS.....	57
23.I	PERIODIC PROGRAM INSPECTIONS.....	58
23.J	MODIFICATIONS.....	59
23.K	PERIODIC CROSS-CONNECTION TESTING.....	59
23.L	SYSTEM NOT IN COMPLIANCE.....	60
23.M	NOTIFICATION.....	60
23.N	EMERGENCY PROCEDURE.....	60
23.O	EMERGENCY CROSS-CONNECTION RESPONSE PLAN.....	61
24.	WATER CONSERVATION IN LANDSCAPING.....	68
24.A	PURPOSE.....	68
24.B	APPLICABILITY.....	68
24.C	DEFINITIONS.....	68
24.D	LANDSCAPE DOCUMENTATION PACKAGE.....	72
24.E	ELEMENTS OF LANDSCAPE DOCUMENTATION PACKAGE.....	73
24.F	PROVISIONS FOR EXISTING LANDSCAPES.....	81
24.G	EFFECTIVE PRECIPITATION.....	82

# **WATER SERVICE AND USE RULES AND REGULATIONS**



## **CITY OF SANTA CLARA**

---

### **1. GENERAL STATEMENT AND DEFINITIONS**

#### **1.A ESTABLISHMENT OF RULES AND REGULATIONS**

The following rules and regulations, rates and charges governing Water Service furnished by the City of Santa Clara, California are hereby established.

#### **1.B GENERAL STATEMENT**

The City of Santa Clara shall furnish Water Service including distribution Main extensions in accordance with Municipal Services Division Rules and the regulations hereinafter set forth, and in accordance with all other applicable ordinances, to any property within the corporate limits of the City and to such areas outside the City limits as the City Council may designate.

All water used must be taken through a water meter unless a permit is first obtained in compliance with the regulations contained in these Rules and Regulations.

Applications for service to Premises for which a Service Connection has already been installed may be made in accordance with the Municipal Services Division Rules and Regulations, which are incorporated herein by reference as though set forth in full. Such applications will signify the Customer's willingness and intention to comply with all applicable Rules and Regulations and rates duly adopted, and to make payment for Water Service rendered.

**1. GENERAL STATEMENT AND DEFINITIONS (Continued)**

If application is made for service to property where no Service Connection has been installed, but a distribution Main is adjacent to the property, the applicant, in addition to making application for service, shall comply with the regulations governing the installation of Service Connections. Where an extension of the distribution Main is necessary or a substantial investment is required to furnish service, the applicant shall be informed by the City of the applicable provisions of the Code and these Rules and Regulations governing the extension of distribution Main and facilities.

**1.C WATER USE RESTRICTIONS AND PROHIBITIONS**

The following list of Water Use Restrictions and Prohibitions are specific measures which prevent water waste and achieve reasonable, yet substantial, reductions in water use by all users in the City.

The following uses of water are prohibited by the City:

- (a) Wasting water, which includes but is not limited to, the flooding or runoff on City sidewalks, gutters, and streets.
- (b) Cleaning of sidewalks, driveways, patios, parking lots, or other paved or hard-surfaced areas, or washing cars, buses, boats, trailers, or any vehicle by use of a hose unless that hose is fitted with an operating automatic shut-off valve.
- (c) Water waste due to broken or defective plumbing, fire system, irrigation system, or any appurtenance thereto; or to open or to leave open any stopcock or faucet so as to permit water waste.
- (d) Service of water by any restaurant unless requested by a patron.
- (e) Installation of a single-pass cooling system.
- (f) Installation of a non-recirculating, decorative fountain.
- (g) Construction of a non-recirculating conveyor car wash.

**1.D INCORPORATION OF MUNICIPAL SERVICES DIVISION RULES AND REGULATIONS**

These Rules and Regulations hereby incorporate by reference all Rules and Regulations of the Municipal Services Division of the Department of Finance of the City of Santa Clara. Rules governing the establishment of credit, rendering and payment of bills, financial aspects of temporary service or discontinuance of service for water are contained in the Municipal Services Division Rules and Regulations.

**1.E DEFINITIONS**

Terms appearing with an initial letter capitalized, are defined terms. The definitions set forth in the Rules and Regulations for the Municipal Services Division, Department of Finance, are incorporated by reference as set forth in full, and those

## 1. GENERAL STATEMENT AND DEFINITIONS (Continued)

definitions are not repeated here; reference should be made to Section 1.B of Municipal Services Division Rules and Regulations. Unless the particular provision or context otherwise requires, the definitions and provisions contained in the Water Service and Use Rules and Regulations Section 1.E. and the Municipal Services Division Rules and Regulations Section 1.B, shall govern the construction, meaning, and application of words and terms used in these Rules and Regulations. The singular of a word or term shall include the plural and the plural shall include the singular. Such words or terms as defined in these Rules and Regulations Section 1.B shall be initially capitalized when used in context of these Rules and Regulations.

**Backflow:** The reverse flow of water or any other fluid or substance or any combination or mixture thereof from the Customer's system into the City's water distribution system.

**Backflow Prevention Device:** A City-approved device that prevents Backflow into the City's water distribution system.

**Best Management Practice ("BMP"):** A policy, program, practice or rule aimed at more efficient use or conservation of the water resources of the City and State.

**City:** The City of Santa Clara, California, acting through its elected officials or its duly authorized officers, employees, agents, or fictitious business names.

**City Equipment:** Any property, facility, apparatus, or material associated with providing one or more Utility Services including, but not limited to, City's electric distributions system, water distribution system, pipes, ducts, conduits, valves, meters, backflow prevention devices, transformers, protective devices, wiring, switches, meters and other appurtenances required to provide a Utility Service to Customer's Premises.

**City Employee:** Any authorized City employee, agent or representative.

**City's Operating Convenience:** The utilization of facilities or practices which contribute to the overall efficiency, safety or reliability of the water utility operations. City's Operating Convenience does not refer to Customer convenience or adoption of practices required to comply with applicable ordinances, rules and regulations, or similar requirements of public authorities.

**City's Water System:** The water supply and distribution system and all appurtenances thereto owned and operated by the City, including all Service Connections to the City's water mains.

**City Code:** The Code of the City of Santa Clara, California.

## 1. GENERAL STATEMENT AND DEFINITIONS (Continued)

**Commercial Service:** Provision of water to Premises where the Customer is engaged in trade.

**Cross-Connection:** Cross-connection means an unprotected actual or potential connection between a potable water system used to supply water for drinking purposes and any source or system containing unapproved water or a substance that is not or cannot be approved as safe, wholesome, and potable. Bypass arrangements, jumper connections, removable sections, swivel or changeover devices, or other devices through which Backflow could occur, shall be considered to be cross-connections.

**Customer:** The Person, Persons, firm, association, governmental agency, corporation or other legal entity who use, are entitled to use, or benefit from the use of City of Santa Clara Utilities.

**Domestic Service:** Water Services to single- or multiple-dwelling Premises for use by residents and residential associations, including water for irrigation and other similar and customary purposes.

**Fire Service - Private:** Provision of water to Premises for automatic fire sprinkler service.

**Fire Service - Public:** Public fire protection service through fire hydrants connected to the water distribution system and made available to the City Fire Department.

**Industrial Service:** Provision of water to Premises for use in manufacturing or processing activities.

**Main Extensions:** Extension of distribution pipelines, exclusive of Service Connections, beyond existing facilities.

**Mains:** Distribution pipelines, which are used to service the general public, and are located in streets, highways, public rights of way or easements through private lands.

**Meter Rate Service:** Provision of water in measured quantities through metered service.

**Municipal Or Public Use:** Provision of water to municipal departments or for other public uses.

**Owner:** Property or building Owner and authorized agents



**1. GENERAL STATEMENT AND DEFINITIONS (Continued)**

**Service Connection:** The connection of City of Santa Clara water, sewer or electric equipment to Customer equipment for the purpose of providing Utility Services. This includes, but is not limited to, all or any portion of the water pipe and appurtenances, including the meter, between the City distribution line and an individual Customer's system. All or any portion of the water pipe and appurtenances, including meter, between the City distribution line and an individual Customer's system.

**Service Order:** Customer request for the connection or discontinuance of Water Service.

**Tamper:** To rearrange, bypass, damage, alter, interfere with, break, prevent normal function of equipment in any way, prevent access to equipment, or hinder a City Employee in the performance of their duties.

**Temporary Water Service:** Service for an enterprise or activity which is temporary in character, where it is known in advance that service will be of limited duration, or the permanency of which has not been established.

**Total Cost:** The sum of all fully located expenses including overheads, all labor, material and use of City Equipment to complete a particular repair or addition to the system, and the cost of associated resources consumed.

**Utility Connection Point:** Point of delivery determined by the City Water Department.

**Water Service:** Provision of water, either potable or recycled, to property or Premises through a Service Connection.

## **2. NOTICES**

### **2.A NOTICES TO THE CUSTOMER**

Notice, under and pursuant to the effective Rules and Regulations of the City, from the City to a Customer may be given by written notice, either delivered by the City or properly enclosed in a sealed envelope and deposited in any United States Post Office postage prepaid, addressed to the Customer's last known address.

### **2.B NOTICES TO THE CITY**

Requests for permits or licenses pursuant to the effective Rules and Regulations of the City and notices from any Water Service Customer to the City regarding a relocation of Water Service, an increase in size of Water Service, or any material change either in the amount or character of appliances or equipment installed upon the Premises may be presented by the Customer or authorized agents, in person, or sent to:

City of Santa Clara  
Water and Sewer Utilities  
1500 Warburton Ave.  
Santa Clara, CA 95050

### **3. CONTRACTS**

- 3.A Contracts will not be required as a condition prior to Water Service except:
- 3.A.1 As conditions in the regular schedule of rates approved or accepted by the City;
  - 3.A.2 As may be required for water extensions for Temporary Water Service or speculative projects;
  - 3.A.3 As may be required for construction purposes as a condition prior to Water Service;
  - 3.A.4 Any Customer Application for Water Service which in the judgment of the City is not a standard practice;
  - 3.A.5 A contract may be required for special operating conditions or other circumstances as may be required for the City's Operating Convenience.

## **4. APPLICATION FOR WATER SERVICE**

### **4.A SERVICE ORDER APPLICATIONS**

Application is required by the Municipal Services Division Office when Water Service is desired. By applying for any Water Service, an applicant indicates their willingness and intention to comply with these Rules and Regulations, and applicable rates. Application for Water Service does not in itself bind the City to serve any applicant except under reasonable conditions as determined by the City, nor does it bind the applicant to take Water Service for a longer period than the minimum requirements of the appropriate rate schedule(s).

Applications for residential, commercial, and industrial service will be accepted by telephone or in person at the Municipal Services Division.

### **4.B CHANGES IN WATER SERVICE**

When a Customer intends to make any material change either in the amount or character of the equipment installed upon the Premises to be supplied with water by the City, the Customer shall immediately provide written notice to the City Water Utility. Failure to comply may result in a discontinuance of Water Service without notice.

Customer will be liable for damages to City Equipment and facilities resulting from the Customer's failure to provide written notification to, and approval of, the City Water Utility prior to the addition of water demand.

Customer may be subject to reassessment of rate schedule qualification as provided by these Rules and Regulations.

## 5. RATES

### 5.A **RATES**

The rates to be charged by and paid to the City for Water Service shall be the rates legally in effect and on file with the City Clerk, where they shall be available for public inspection.

### 5.B **TEMPORARY RATE SCHEDULE**

An Applicant for Water Service may be assigned a temporary rate schedule until qualification parameters for a customary rate schedule are met. The qualification period shall not exceed twelve (12) months and any change in rate schedule due to new Water Service qualification will apply retroactive to the date of qualification under applicable rate schedule then in effect. The selection of the temporary rate shall be made by the Municipal Services Division and based on historical usage for the Premises, historical usage of the Customer, (an estimate if historical usage is not available), or as provided for by these Rules and Regulations.

### 5.C **ESTABLISHMENT OF NEW OR OPTIONAL RATES**

If the City adopts new or optional schedules or rates, the City shall take such measures as may be reasonable to advise those of its Customers who may be affected by the change.

In the case where the City adopts new rate schedules, which allows a Customer to qualify for more than one rate or schedule, the Customer may request which applicable rate or schedule is desired. Upon request, the Municipal Services Division shall assist the Customer to select the most appropriate rate or schedule, or in the absence of a request, the Municipal Services Division shall have the authority to make the selection based on the available information.

### 5.D **REASSESSMENT OF RATE SCHEDULE QUALIFICATION**

A Customer may request a reassessment of their qualification for a particular rate schedule. A change to a different applicable schedule, as approved by the Municipal Services Division, shall become effective for service rendered after the next regular meter reading following the date of approval by the City. The effective date may be delayed if a change in Water Service hardware, watermeter or other associated equipment is required. Notices shall be served as indicated in Water Service and Use Rules and Regulations Section 2 herein.

### 5.E **SERVICE BY FACILITIES PURCHASED FROM OTHER UTILITIES**

Where the City has purchased Water Service facilities from other water utilities, the Customer shall be placed on the applicable City rate schedule.

## **6. METER TEST AND ADJUSTMENT OF BILLS FOR METER ERROR**

### **6.A METER TEST**

Each meter will be tested at regular intervals which shall be determined by the Water Utility. In no case shall the interval between tests exceed 20 years.

### **6.B METER TEST - CUSTOMER REQUEST**

6.B.1 Any Customer may, after giving not less than one (1) week's notice, request the City to test the meter serving his/her Premises.

6.B.2 Except as provided herein, the City may require from the Customer a fee to cover the cost of the test.

6.B.3 The fee will be refunded to the Customer if the meter is found, upon test, to register more than two (2%) percent fast under conditions of normal operation. The deposit will be retained by the City to cover test costs if the meter is less than two (2%) percent fast. The Customer will be notified, not less than five (5) days in advance of the time and place of the test.

6.B.4 A Customer shall have the right to require the City to conduct the test in his presence, or in the presence of his representative. A written report giving the results of the test will be supplied to the Customer within ten (10) days after completion of the test.

### **6.C ADJUSTMENT OF BILLS FOR METER ERROR**

#### **6.C.1 Fast Meters**

When, as a result of any test, a meter is found to be registering more than two (2%) percent fast, under conditions of normal operation, the City will make necessary adjustments to the Customer's bill (credit or charge) to correct the overcharge based on corrected meter readings (0% greater than actual consumption) for the period in which the meter was in use in accordance with Municipal Services Division Rules and Regulations Section 6.H.3.

#### **6.C.2 Slow Meters**

6.C.2.(a) Upon testing, if a meter under normal conditions is found to register less than ninety-eight percent (98%) of the actual consumption, Municipal Services Division may bill the Customer for the undercharge based on the corrected meter

**6. METER TEST AND ADJUSTMENT OF BILLS FOR METER ERROR  
(Continued)**

readings (100% actual consumption) for the period in which the meter was in use in accordance with Municipal Services Division Rules and Regulations Section 6.H.3.

- 6.C.2.(b) Upon testing, a meter used for other than domestic service is found to register less than ninety-eight percent (98%) of the actual consumption, Municipal Services Division may bill the Customer for the undercharge based upon the corrected meter readings (100% actual consumption) for the period in which the meter was in use in accordance with Municipal Services Division Rules and Regulations Section 6.H.3

**6.C.3 Non-Registering Meters**

Municipal Services Division may bill the Customer for water consumed while the meter was not registering. At Municipal Services Division's option, the bill will be computed on an estimate of consumption based on the Customer's use during the same season of the preceding year or based on an alternate method of estimation determined by Municipal Services Division, which includes, but is not limited to, the City's experience with Customer's usage on the same rate schedule; and the general characteristics of the Customer's operations.

## **7. APPEAL FROM THE APPLICATION, REQUIREMENTS, OR INTERPRETATION OF THESE RULES AND REGULATIONS**

- 7.A Unless California law, this Code, or an ordinance or resolution of the City prescribes an alternative procedure, any Customer may request an appeal from an interpretation, requirement or application of the Rules and Regulations. The appeal may be made by submitting a written Request for Appeal to the Director of Water and Sewer Utilities. Upon receipt of a Request for Appeal, the Director shall review the request and notify the appellant in writing of his/her decision within forty-five (45) days of the request. Appeal from the application, requirements or interpretation of the Municipal Services Division Rules and Regulations shall be made in accordance with those Rules and Regulations.
- 7.B A Customer may further appeal the Director's determination regarding the appeal from the application, requirements, and/or interpretation of these Rules and Regulations to the City Manager. Such a subsequent appeal must be made in writing and received by the City Clerk within seven (7) calendar days after receipt of the written decision by the Director.
- 7.C The appeal to the City Manager shall consist of a written notice of the appeal, written details explaining the grounds on which the appeal is based, and the payment of an appeal fee of twenty-five dollars (\$25.00) or an amount otherwise modified or set from time to time by resolution of the City Council.
- 7.D The appeal to the City Manager shall be heard within forty-five (45) days from the filing of said notice. If an address is not provided in the notice of appeal, such notice need not be given to the Customer.
- 7.E Written notice of such hearing informing the appellant of the date and time of the hearing shall be personally served upon the appellant, or on any person employed in the place where the business in question, or activity, is maintained. If service cannot be made in the foregoing manner, then a copy of such notice may be mailed to the appellant at his or her place of business or his or her last address known to the City Clerk, at least five (5) days prior to the hearing. The time of such notice may be shortened by the City Manager with the written consent of the appellant.
- 7.F At the hearing, an opportunity will be afforded to the appellant and the City to make statements for the record regarding the facts in dispute and the circumstances surrounding the matter being appealed. A record of the hearing will be established.
- 7.G The City Manager shall render his/her decision within forty-five (45) days after the conclusion of said hearing. In his/her decision, the City Manager may reverse, set aside, affirm, amend or modify the decision of the Director. The decision of the City Manager shall be final insofar as the administrative hearing process is concerned.



## **8. CITY DISTRIBUTION SYSTEM ON CUSTOMER PREMISES**

### **8.A NEW DEVELOPMENTS**

- 8.A.1. Prior to submitting any projects for Water Service, the Developer shall submit a site plan showing all existing utilities, trees, structures and easements to the Water Utility. Developer shall then contact City Electric Department and Water Utility for requirements and prepare the site plan resolving coordination of all utilities. Charges for new Service Connections are payable in advance and shall be in accordance with applicable sections of the City Code.
- 8.A.2. Most Water Service Connections will normally be furnished and installed by City between the street curb and the property line.
- 8.A.3. Subject to the approval of the Director of Water and Sewer Utilities, and providing there is no depressed-grade condition planned or existing on the Premises, water needs may be served by an on-site water distribution system and individual meters installed (either by City or Developer) and maintained by City in an easement (minimum width 15 feet) granted for that purpose. Developer must contact the Water Utility for the water infrastructure design criteria prior to designing the on-site utilities.
- 8.A.4. All trees, existing and proposed, shall maintain a minimum clearance of 10 feet from any existing or proposed Water facilities. Existing trees that conflict will have to be removed. Trees shall not be planted in water easements or public utility easements.

### **8.B RELOCATION OF EXISTING FACILITIES**

Any relocation of existing City facilities shall be paid for by the requesting party.

### **8.C RIGHTS OF WAY**

Water easements shall be provided by Customer for all City water utility facilities. City will determine the location of easements and prepare document(s) at customer's expense, for Customer's signature, unless easements are dedicated on a Tract or Parcel map.

## **9. ACCESS, INTERFERENCE, TAMPERING, AND THEFT**

### **9.A CITY RIGHT OF ACCESS**

The City shall have immediate and unhindered access, without notice, to and from a Customer's Premises for any purpose reasonably connected with the furnishing of Water Services, including but not limited to the abatement of water waste, inspection, reading, testing, maintenance, removal, and replacement of City Equipment. The Water Utility and Municipal Services Division jointly and singly retain the authority to enforce these provisions.

When access is not immediate and unhindered, the City may issue citations with the following graduated levels: notice of denied access, warning of impending citation, citation, warning of impending civil/criminal action, or any other enforcement remedy provided for in the City Code. The City may require the Customer to provide, without cost to the City, a new approved location for equipment or to re-establish the immediate and unhindered access to the previously approved location.

### **9.B WORK OUTSIDE CITY'S OPERATING CONVENIENCE**

When requested by the Customer, and where circumstances permit some flexibility in scheduling of necessary repairs or improvements, the City may at its sole option perform the work during other than normal City working hours for the increased convenience of the Customer, providing that the Customer acknowledges in writing, prior to the performance of said work, their willingness to pay for any costs incurred by the City as a result of performing said work at other than during normal City working hours.

### **9.C INTERFERENCE**

Any person preventing or interfering with any City Employee in the lawful discharge of duties is subject to penalties, prosecution, and punishment.

### **9.D TAMPERING**

To rearranging, bypassing, damaging, altering, breaking, preventing normal function of equipment in any way, or preventing access to Service Connection or other City owned facilities may be considered Tampering. It shall be unlawful for, and the City may immediately discontinue Water Service and bring a criminal action against, any person, firm, corporation or association that commits, authorizes, solicits, aids, abets or attempts to:

9.D.1 Change the intended course or path of Water Services without authorization from the City.

9. ACCESS, INTERFERENCE, TAMPERING, AND THEFT (Continued)

- 9.D.2 Make, or cause to be made, any connection or restoration with property owned or used by the City to provide Water Services.
- 9.D.3 Prevent any water meter, or other device used to determine the amount of water consumed by a Customer, from accurately performing its measuring function.
- 9.D.4 Tamper with, or otherwise access without permission from the City Water Utility, any property owned or used by the City to provide Water Services.
- 9.D.5 Use or receive the Water Service without consent of the City or payment of all lawful charges.

9.E **FRAUD**

The City may discontinue the Service Connection without notice if a Customer's actions or the conditions of the Premises indicate the Customer's intent to defraud the City.

9.F **LIABILITY, PENALTY, PROSECUTION AND PUNISHMENT FOR VIOLATION**

- 9.F.1 Legal liability and responsibility, for violation of these Rules and Regulations, lies with the Customer of record and/or any additional recipient who benefits from the Water Service.
- 9.F.2 For violation of the Rules and Regulations set forth regarding interference, Tampering or theft, the City shall levy a charge set forth in the City of Santa Clara Municipal Fee Schedule, adopted by resolution of the City Council.

9.G **CIVIL ACTION**

In any civil action brought, the City may recover three times the amount of actual damages, plus the cost of the suit, reasonable attorney's fees and any other amounts allowed by law. In addition, the City may bring an action to enjoin and restrain any violation of these Rules and Regulations.

## **10. TEMPORARY WATER SERVICE**

Temporary water service, as herein considered, refers to service of a temporary nature or of questionable permanency. The City shall, if no undue hardships result therefrom, furnish temporary service under the following conditions:

### **10.A TIME LIMIT**

Temporary Service Connections shall be disconnected and terminated within twelve (12) months after installation unless an extension of time is granted in writing by the City. (See Chapter 31, Article II of the City Code for rules and regulations concerning temporary service from fire hydrants.)

### **10.B CHARGE FOR WATER SERVED**

Charges for water furnished through a temporary water Service Connection shall be at the established rates for regular Customers.

### **10.C INSTALLATION CHARGE AND DEPOSITS**

The applicant for temporary service will be required:

- 10.C.1 To pay to the City in advance the estimated cost of installing and removing all facilities necessary to furnish such service, unless other arrangements are approved by the City Council. If service is supplied through a fire hydrant and hydrant meter, the applicant will be charged in accordance with the established rate schedule in effect at the time application is made.
- 10.C.2 To deposit with the Municipal Services Division an amount sufficient to cover bills for water during the entire period such temporary service may be used, and as set forth in the City's Municipal Fee Schedule service deposits in effect at the time.
- 10.C.3 Nothing in these Rules and Regulations shall limit or affect the right of the City to collect from the Customer any other or additional sums of money which may become due and payable to the City from the Customer by reason of the Temporary Water Service furnished or to be furnished. The City may refuse Water Service if, in the judgment of the City, unsafe or hazardous conditions exist.

### **10.D REFUNDS**

A refund of the Temporary Water Service deposit less applicable fees or charges will be applied to the Temporary Water Service closing bill. An Owner of a Premises, executive officer of corporation, or business, with an unpaid closing bill

10. TEMPORARY WATER SERVICE (Continued)

can transfer the outstanding balance to any existing or future accounts without regard to Customer class.

10.E **TEMPORARY WATER PERMIT**

- 10.E.1 Any person or company desiring to use water drawn from a fire hydrant for the purpose of spraying, jetting or dust control or for any other reason must first obtain a temporary water permit by applying to the Water Utility. (See Section 17.E.)
- 10.E.2 It is specifically prohibited to operate the valve of any fire hydrant other than by the use of a spanner wrench designed for this purpose.

## **11. SHORTAGE OF SUPPLY AND INTERRUPTION OF DELIVERY**

- 11.A The City will exercise reasonable diligence and care to furnish and deliver a continuous and sufficient supply of Water Services to the Customer, but does not guarantee continuity or sufficiency of supply. The City will not be liable for any damage resulting from the interruption, shortage, or insufficient supply of Water Services to the Customer.
- 11.B The City will have the right to suspend temporarily the delivery of Water Service whenever necessary to make repairs or improvements to its system. Reasonable notice, as circumstances permit, will be given to the Customers, and the repairs or improvements will be completed as rapidly as possible during normal City working hours, and where possible, with the least inconvenience to the Customers.
- 11.C If a shortage of supply occurs, the City will make an apportionment of the available supply of water among Customers as ordered or directed by the City Council. In the absence of an order or direction by the City Council, the City Manager will apportion the available supply of water among Customers in a reasonable manner.

## **12. DESCRIPTION OF STANDARD WATER SERVICE**

### **12.A NUMBER OF SERVICES TO SEPARATE PREMISES**

Separate Premises under single control or management shall normally be supplied through a single Service Connection. The Customer may request separate individual services, whereupon the City shall evaluate Customer's request and, at City's option, may provide separate services.

### **12.B SERVICE TO MULTIPLE UNITS**

Separate residential houses, apartments or other multi-family accommodations, or business establishments on the same Premises or on adjoining Premises under a single control or management may be served by either of the following methods, at the option of the City, taking into consideration the Customer's preference:

12.B.1 Through a single metered Service Connection to the entire Premises, as provided in Rate Schedule.

12.B.2 Through separate metered Service Connections to each or any group of units, provided that the system from each service is independent and not interconnected with any others.

### **12.C SINGLE METER SERVICE TO MULTIPLE TENANTS/UNITS**

When separate domestic and/or commercial services are served on the same Premises through a single-metered Service Connection, the Owner may resell water to tenants of the Premises at rates identical with the rates of the City that would apply if that Water Service was supplied to the individual tenants or units directly by the City, regardless of the rate the Owner is charged, provided the Owner complies with either 12.C.1(a) or 12.C.1(b). Within thirty (30) days upon written request by the City, the Owner must submit four (4) consecutive quarterly water billing summaries to the City for compliance auditing purpose.:

12.C.1(a) Water is separately metered to the individual tenants or units.

12.C.1(b) Water is not separately metered. The Owner shall be responsible for purchase of all water used for landscape irrigation and other common area uses. The tenants shall receive separate bills for the water used by the tenants alone without any incremental charges (service or handling) billed to tenants' accounts. For residential accounts, the charge to the tenants for water shall be derived from a consistent formula for allocation that includes the number of individuals in each household (e.g., 100% occupancy or 50% occupancy and 50% square footage). For non-residential master-metered accounts, the amount allocated to each tenant shall be consistently calculated based on a formula that includes a

12. DESCRIPTION OF STANDARD WATER SERVICE (Continued)

reasonable standard for water use at each business type and square footage of each tenant's unit.

- 12.C.2 The charge to the tenants for such water is absorbed in the rental charges for that individual tenant or unit with no separate identifiable charge for water, and the rent does not vary with water consumption.
- 12.C.3 If water is resold otherwise than provided for above, the City may Discontinue service to the Owner, or furnish water directly to the individual tenants or units through separate meters installed at the sole cost of the Owner.
- 12.C.4 The responsibility for payment for all Water Services furnished to individual tenants or units on the same Premises, under these Rules and Regulations and supplied through a single Service Connection, shall be the obligation of the Owner. It shall further be the responsibility of the Owner to inform individual tenants or units of the method of metering Water Services. The City will have no contractual relationship with tenants of individual units, where a Customer receives service through a single metered connection, nor a relationship created by payments made directly to the City on behalf of the Owner by tenants or other third parties.
- 12.C.5 As a condition of service for single metered service, the Owner has agreed to be governed by the applicable City Rules and Regulations. As a further condition of service for single metered service, the Owner has agreed that the City may inspect and examine the Owner's billing procedures from time to time to determine that such service is made in accordance with these Rules and Regulations, or as otherwise may be authorized by the City.



### **13. RESPONSIBILITY FOR EQUIPMENT AND PROTECTIVE DEVICES**

#### **13.A RESPONSIBILITY FOR EQUIPMENT**

- 13.A.1 The Customer shall, at the Customer's risk and expense, furnish, install and keep in good and safe condition equipment and suitable housings that may be required for receiving, controlling, applying and utilizing water, regardless of the location of the meters, or other City Equipment, and the City shall not be responsible or liable for any loss or damage caused by the improper installation of such water equipment, or the negligence, want of proper care or wrongful act of the Customer or of any of the Customer's tenants, agents, employees, contractors, licensees or permittees in installing, maintaining, using, operating, Tampering, or interfering with such equipment. The City shall not be responsible or liable for damage to Customer's property and/or equipment, either when the water is turned on originally or when turned on after a temporary shutdown, during normal operating conditions, times of local or system trouble and/or after Restoration. The City shall not be responsible or liable for damage to, or the failure of, any component of the Customer's equipment due to a defect in Customer's equipment or failure to maintain adequate protection as described in these Rules and Regulations.
- 13.A.2 The Customer shall exercise reasonable care to prevent City Equipment on the Customer's Premises from being Tampered or interfered with, damaged, or destroyed. The Customer shall be liable for damage to City Equipment arising from negligence, want of proper care, or wrongful act of the Customer or Customer's tenants, agents, employees or contractors. If any defect is discovered by the Customer, the Customer shall promptly notify the City.

#### **13.B PROTECTIVE DEVICES**

- 13.B.1 It is the Customer's responsibility to furnish, install, inspect and keep in good and safe condition at that Customer's own risk and expense, all appropriate protective devices of any kind or character, which may be required to properly protect the Customer's facilities and equipment from any event caused without negligence by the City or from any event caused by another Customer. The City is not responsible or liable for any loss or damage occasioned or caused by the negligence, or wrongful act of the Customer, or of any of that person's agents, employees or licensees in omitting, installing, maintaining, using, operating or interfering with any such protective devices.

13. RESPONSIBILITY FOR EQUIPMENT AND PROTECTIVE DEVICES (Continued)

- 13.B.2 It is the Customer's responsibility to select and install such protective devices as may be necessary to coordinate properly with the City's protective devices to avoid exposing other Customers to unnecessary water service interruptions. Failure to provide appropriate protective devices or to properly coordinate said equipment with the City's protective devices may result in discontinuance of Water Service.

## **14. SERVICE CONNECTIONS AND METERS**

### **14.A SERVICE CONNECTIONS**

Water Service Connections will be installed in the size and at the location desired by the applicant where such requests are reasonable. Service Connections will be made only to property abutting on public streets or to such distribution Mains as may be constructed in alleys or rights-of-way at the convenience of the City. Service Connections installed in the new subdivisions prior to the construction of streets or in advance of street improvements must be accepted by the applicant in the installed location. Charges for new Service Connections are payable in advance and shall be in accordance with applicable sections of the Code.

### **14.B METERS**

14.B.1 When an authorized service entrance has been established, meters will normally be furnished and installed between the curb and the property line. The charges for meters shall be in accordance with applicable sections of the Code.

14.B.2 No rent, or other charge, will be paid by the City for a meter or other facility, including housing and connections, located on a Customer's Premises.

14.B.3 All meters will be sealed by the City at the time of installation, and no seal shall be Tampered with or broken by the Customer at any time thereafter.

14.B.4 The City reserves the right to meter any and all services and to apply the established metered rates to the quantity of water measured by them.

### **14.C CHANGES IN LOCATION OF METERS AND SERVICE CONNECTIONS**

Meters or services moved for the convenience of the Customer will be relocated at the Customer's expense. Meters or services moved to protect the City's property will be moved at the City's expense.

### **14.D CHANGES IN SIZE OF METER**

Upon request of a Customer, the size of an existing meter may be changed. Charges for meter changes shall be made by applying the rates shown in the Code to the applicable situation as follows:

14. SERVICE CONNECTIONS AND METERS (Continued)

- 14.D.1 When an existing meter is replaced in size by a larger meter, the Customer shall be given a credit for the rate established for the existing meter. Said credit shall be applied against the rate established for the larger meter, and the differential cost shall be paid to the City by the Customer.
- 14.D.2 When an existing meter is replaced in size by a smaller meter, the Customer shall be given a credit for 70% of the rate established for the existing meter. Said credit shall be applied against the rate established for the smaller meter and the differential cost, if any, shall be paid to the City or refunded to the Customer as the case may be.

14.E **OWNERSHIP**

The Service Connection, whether located on public rights-of-way or easements through private property, is the property of the City, and the City reserves the right to repair, replace and maintain it, as well as to remove it upon discontinuance of service.

14.F **MAINTENANCE**

The Service Connection, including the meter and the meter box, will be repaired and maintained by the City at its expense except for damages as set forth in Section 13. The City is not responsible for the installation and/or maintenance of water lines beyond the end of its Service Connections and/or meter.

14.G **SPLIT SERVICE CONNECTIONS**

The City, in several locations, has installed in residential subdivisions two meters on a common service, known as a “split service.” In the event that a Customer wishes a single service to replace the split service, the charges will be in accordance with the City Code for a new 1" service including street opening fees.

## **15. MAIN EXTENSIONS**

### **15.A EXTENSIONS**

Main extensions and Service Connections for Applicants, sub-dividers or property developers shall be made in accordance with the applicable provisions of the Code.

### **15.B RIGHT TO CHANGE POLICY**

It is understood that the policy stated herein may be changed by the City Council at such time or times as it may deem advisable or necessary. In no instance is this policy to apply retroactively to any subdivision, development, or Service Connection previously approved by the City Council and for which an agreement covering Water Service has been executed.

## **16. AUTOMATIC FIRE SERVICE**

### **16.A PURPOSE**

An automatic fire Service Connection of 4" diameter or larger, up to the size of the connected Main, will be furnished only if adequate provision is made to prevent the use of water from such Service Connection for purposes other than fire extinguishing.

### **16.B REQUEST AND APPLICATION**

- 16.B.1 All requests for automatic fire Service Connection shall be referred to the Water Utility.
- 16.B.2 A location map with a job title and the date the service is needed shall accompany each request.
- 16.B.3 The contractor or Owner shall make application for the fire service at the Utilities Office.

### **16.C INSTALLATION CHARGES**

The applicant will be required to make payment of the fees as specified in the Code for the automatic fire service in advance of installing the Service Connection.

### **16.D QUANTITATIVE CHARGES**

#### **16.D.1 Water for Fires**

No charge will be made for water used to extinguish fires.

#### **16.D.2 Water for Fire Storage Tanks**

Occasionally water may be obtained from an automatic sprinkler service for filling a storage tank connected with fire service, but only if written permission is secured from the Water Utility in advance and an approved means of measurement is available. The rates for general use will be applied.

#### **16.D.3 Other**

Water lost through leakage or in unauthorized testing or used in violation of these Rules and Regulations shall result in an imposition of regular Water Service rates on the fire service account for a minimum of three billing cycles or longer, until such time as illicit use of water through the fire Service Connection is discontinued.

16. AUTOMATIC FIRE SERVICE (Continued)

16.E **VIOLATION OF AGREEMENT**

If water is used from a fire service in violation of the agreement or of these Rules and Regulations, the City may, at its option, discontinue and remove the service.

16.F **OWNERSHIP OF CONNECTION**

The Service Connection and all equipment appurtenant thereto shall be the sole property of the City, and no part of the cost thereof will be refunded to the applicant.

16.G **PRESSURE AND SUPPLY**

The City assumes no responsibility for loss or damage because of lack of water or pressure and merely agrees to attempt to furnish such quantities and pressures as are available in its general distribution system. The service is subject to shutdowns and variations required by the operation of the system or due to accidents beyond the ability of the City to control.

16.H **RATES**

Monthly charges furnished for automatic fire sprinkler service shall be at the established rates.

## **17. FIRE HYDRANTS**

### **17.A USE OF AND DAMAGE TO FIRE HYDRANTS**

No person or persons, other than those designated and authorized by proper authority, shall open any fire hydrant, attempt to draw water from it or in any manner damage or Tamper with it. Any violation of this regulation is punishable by law, and in accordance with City Code.

### **17.B INSTALLATION OF FACILITIES ON PRIVATE PROPERTY**

Fire hydrants and other facilities will be installed for use on private Premises by the City under agreement entered into by the parties concerned and the City.

### **17.C MARKING OR COLOR CODING OF HYDRANTS**

#### **17.C.1 Public Hydrants**

All public hydrants including, but not limited to, hydrants which are municipally installed, operated, controlled and maintained shall have white barrels or bodies with the color coding, marking, or stenciling as required by the State Fire Marshal.

#### **17.C.2 Private Hydrants**

All private hydrants shall have the barrel, top, and nozzle caps painted “safety yellow” to distinguish them from public hydrants.

### **17.D MODIFICATION OR RELOCATION OF FIRE HYDRANTS**

If a property Owner, or other party of a developed or redeveloped Premises, desires a change in the size, type or location of an existing fire hydrant, said Owner or other party shall bear all costs of such changes, without refund. If a fire hydrant is installed by the City which precedes the development of the Premises and the location of said fire hydrant interferes with the development of the Premises, the City, at its sole expense, shall move the existing fire hydrant to a new location on the Premises. Any change in the location of a fire hydrant must be approved by the Fire Chief.



17. FIRE HYDRANTS (Continued)

17.E **WATER FROM FIRE HYDRANTS**

17.E.1 Permit to Extract Water Required

It shall be unlawful for any person to take water from any City fire hydrant, except the City Fire Department, without first obtaining a permit and complying with the regulations contained in these Rules and Regulations.

17.E.2 Application; Issuance and Deposit

After application to and approval of the Water Utility, permits required by the preceding section will be issued by the Municipal Services Division Office upon application and payment of a deposit, a portion of which is non-refundable. (The refundable portion of a deposit is not normally required of other public agencies or utilities.)

17.E.3 Denial or Revocation

The City shall have the right to refuse or revoke any permit issued pursuant to these Rules and Regulations when the use of same results in surging or pressure complaints due to careless operation of the fire hydrant valve or for any other cause.

17.E.4 Issuance of Equipment; Manner of Extracting Water; Water Meters Generally

The applicant filing for a permit under the preceding section shall then report to the Water and Sewer Utilities corporation yard, where a portable water meter with hose adapter for connection to the City fire hydrants and a spanner wrench will be issued. No other equipment, tools or accessories shall be furnished by the City. All water used must be taken through the water meter. The permittee shall notify the Santa Clara Fire Department upon the issuance of the water meter and before the use of the hydrants. The water meter shall be immediately removed and disconnected from the fire hydrant after hydrant use has concluded. The permittee shall notify the Santa Clara Fire Department at the time the hydrant is no longer being used.

17.E.5 Reading of Water Meters and Rendering of Accounts; Water Drawn for Use Outside City

17.E.5.(a) Meters provided for in the preceding section shall be read monthly. The meter reading can be performed during working hours at the Water and Sewer Utilities corporation yard, between

17. FIRE HYDRANTS (Continued)

the twenty-fifth and the last day of each month. Or the meter reading can be recorded on a card issued with the meter and mailed to the Municipal Services Division Office by the twentieth of each month.

- 17.E.5.(b) Accounts whose meters are not read during this period shall be billed the monthly minimum for a three inch (3") meter and this amount shall not be applicable as payment toward water used, either previously or thereafter. In addition to the monthly minimum, the permittee remains responsible for the full amount of water actually used. Accounts shall be billed monthly for water used at the rates established therefore by the City. Water drawn for use in projects outside the City shall be billed and paid for at one and one-half times the established City rates.

17.E.6 Return of Equipment to City; Final Billing, etc.

When water is no longer required, the water meter and other equipment shall be returned to the Water and Sewer Utilities corporation yard and checked in. The deposit, less the cost of any damage to the meter or hydrant that was used and less the final billing on water usage, shall be returned to the permittee.

17.E.7 Additional Penalty for Violation of Article; Duties of Director of Water and Sewer Utilities

In addition to the penalty provided in the City Code, any person violating any provision of the article may be required to pay two times the rate for the water taken, based on an estimate of the quantity of water taken. Such estimate shall be made by the Director of Water and Sewer Utilities.

## **18. POOLS AND TANKS**

- 18.A When an abnormally large quantity of water is desired for filling a swimming pool or for other purposes, arrangements may be required prior to taking such water. Permission to take water in unusual quantities will be given only if it can be safely delivered through the City's facilities, if other Customers are not inconvenienced, and if there is no mandatory water rationing in effect at the time of the request. All water used shall be metered and billed for in accordance with prevailing rate schedules.

## **19. CONTROL VALVES**

- 19.A The Customer shall install a suitable square or a tee head stop on the riser to the building (or, for multiple buildings, as close to the meter location as practicable) which will operate to control the entire water supply from the Service Connection.
- 19.B Operation by the Customer of the curb stop in the meter box is not permitted except in extreme emergencies. Should the Customer damage the curb stop, they shall reimburse the City for any and all cost of repair or replacement.

## **20. CROSS CONNECTIONS**

### **20.A HEALTH REGULATIONS**

Regulations of the California State Department of Public Health and the Drinking Water Standards of the United States Public Health Service prohibit unprotected Cross Connections between the public water supply and any unapproved source of water.

### **20.B CITY REQUIREMENTS**

Backflow Prevention Devices shall be required at the Service Connection or at a location approved by the City for Premises receiving water from the City and falling in one or more of the following categories:

- 20.B.1 Premises having an auxiliary water supply;
- 20.B.2 Premises on which any substance is handled under pressure in such a fashion as to permit possible entry into the City's water distribution system, including water originating in the City's system that is then boosted in pressure;
- 20.B.3 Premises where the Customer's system has more than one Service Connection coming from different streets, or having internal Cross-Connections that cannot be permanently corrected to meet State and local standards;
- 20.B.4 Premises and/or Customer's systems where, in the opinion of the City or its representative, there is the potential for pollution or contamination of the City water system in the event of Backflow or back-siphonage.
- 20.B.5 Premises receiving Water Service other than from the City are exempt from the requirements until they receive Water Service from the City.

### **20.C APPROVED BACKFLOW PREVENTION DEVICES**

Only approved Backflow Prevention Devices will be accepted. An approved device is any device that has been manufactured and installed in full conformance with the standards established by the Foundation for Cross-Connection Control and Hydraulic Research of the University of Southern California and that has received the approval of the City for use in Santa Clara.

### **20.D PLUMBING CHANGES REQUIRED**

In special circumstances, when the Customer is engaged in the handling of especially dangerous or corrosive liquids or industrial or process waters, the City may require the Customer to eliminate certain plumbing or piping connections as an additional precaution and protection to the Backflow preventive devices. In making the required plumbing connections, the Customer shall comply with local or state plumbing ordinances and codes.

20. CROSS CONNECTIONS (Continued)

20.E **RELIEF VALVE REQUIRED**

Suitable pressure relief valves shall be installed and maintained by the Owner in accordance with the requirements of local or state plumbing codes and ordinances.

20.F **BACKFLOW PROTECTION ON ADDITIONAL WATER SUPPLY LINES**

Whenever Backflow protection has been found necessary on a water supply line entering a Customer's Premises, then any and all water supply lines from the City's Main entering such Premises, buildings or structures shall be protected by an approved Backflow device unless Director of Water and Sewer Utilities determines otherwise.

20.G **INSPECTION OF BACKFLOW PREVENTION DEVICES**

The City will be responsible for inspecting and testing all Backflow Prevention Devices, as well as making any necessary repairs identified through inspection and testing. Inspection and testing will be done on at least an annual basis. Fees for this service will be established from time to time.

20.H **INSTALLATION OF BACKFLOW PREVENTION DEVICES**

20.H.1 New Service Connections. At the time an application for a new service is made by a potential Customer, in accordance with City's policies and regulations, the City will review said application to determine the need for a Backflow Prevention Device on the Customer's service. If Backflow prevention is determined to be required, the Customer shall pay the City in advance in accordance with City's established installation fee schedule.

20.H.2 Existing Service Connections without Backflow Prevention Devices. The City will inspect, from time to time, the Premises of existing Service Connections that, in the opinion of the City or its representative, may require Backflow prevention. If it is determined that a Backflow Prevention Device is required, such determination by the City shall be final, and the installation of a Backflow Prevention Device shall be a condition of continued Water Service.

20.H.3 The City will install the Backflow Prevention Device and charge the Customer the entire cost of the device and its installation. If, in the opinion of the City there was no change in the land use from when the Water Service was first installed, the City may absorb the entire installation cost.

20. CROSS CONNECTIONS (Continued)

- 20.H.4 Upgrading the existing Backflow Prevention Device. An existing Backflow Prevention Device that, in the opinion of the City, does not provide adequate protection, shall be upgraded at the Customer's expense following the procedures in subparagraph 2 above. Upgrading may include repair, complete replacement of the Backflow Prevention Device, or correction on-site or cross-connection hazards.

20.I **INSTALLATION OF FACILITIES ON PRIVATE PROPERTY**

Backflow Prevention Devices may be installed on private Premises by the City under agreement entered into by the Customer and the City.

20.J **REMOVAL OR MODIFICATION OF BACKFLOW PREVENTION DEVICES**

Backflow Prevention Devices shall not be removed or modified by the water user unless approved in advance by the City.

20.K **DISCONTINUANCE OF SERVICE FOR DEFECTIVE APPARATUS**

The service of water to any Premises may be immediately discontinued by the City if defects are found in any protective device installation, or if it is found that unprotected Cross-Connections exist. Service will not be restored until necessary corrections are made.

## 21. RECYCLED WATER USE

Certain uses of Recycled Water are permitted by the State of California. The requirements for such use are defined by CCR, Title 22, Division 4, of the California Administrative Code. The use of Recycled Water within the City is further defined under a permit issued by the California Regional Water Quality Control Board. Wherever the City Rules and Regulations are inconsistent or in conflict with the requirements of Title 22 or of the RWQCB permit, these Rules and Regulations shall be subordinate.

Since codes, laws, statutes and regulations can change without prior approval or knowledge of the City or South Bay Water Recycling (Program), the City, Program or Water Utility do not assume any liability for errors in this document. It is the responsibility of the Customer to check with the Program before initiating any operational or physical changes to the Recycled Water system.

### 21.A ABBREVIATIONS

Abbreviations used throughout Sections 21, 22 and 23 are listed below for reference. Definitions for terms are listed in Section 21.B (below).

**AG:** Air Gap

**AWWA:** American Water Works Association

**County EHS:** County of Santa Clara Environment Health Services

**DC Assembly:** Double Check Backflow Prevention Assembly

**Program:** South Bay Water Recycling Program, administered by City of San Jose for the San Jose - Santa Clara Water Pollution Control Plant

**RP Device:** Reduced Pressure Principal Backflow Prevention Device

**State DHS:** State of California Department of Health Services, Drinking Water Field Operations Branch - Monterey District

**State RWQCB:** California Regional Water Quality Control Board



21. RECYCLED WATER USE (Continued)

21.B **DEFINITIONS**

Whenever the following terms, or pronouns used in their place, occur in Sections 21, 22 or 23 herein, the intent and meaning shall be interpreted as follows:

**Air Gap:** A physical separation between the free flowing discharge end of a water supply pipeline and an open or non-pressure receiving vessel. An approved air gap shall be at least twice the diameter of the water supply pipe measured vertically above the overflow rim of the vessel (in any case, no less than one inch).

**Applicant:** Any entity that applies for Recycled Water Service under terms of the appropriate regulations. The approved Customer may be a different party than the Applicant, but must be specified in the Recycled Water Use License.

**Application for Recycled Water Services:** An agreement issued by the Water Utility to a Recycled Water Service Applicant after the satisfactory completion of the service application procedures. This Agreement forms a service agreement between the Customer and the Water Utility that legally binds the Customer to all conditions stated in the Agreement and all applicable Regulatory Agency requirements.

**Approved Backflow Prevention Assembly:** A device approved by the State of California which is installed to protect any water supply (recycled, potable, Public, private, or on-site) from contamination through Backflow of a substance containing a potential hazard.

**Approved Use:** An application of Recycled Water in a manner, and for a purpose, designated in a Recycled Water Use License issued by the Program and in compliance with all applicable Regulatory Agency requirements.

**Approved Use Area:** A site with well-defined boundaries, designated on the approved On-Site Recycled Water Service Plans, to receive Recycled Water for an approved use and acknowledged by all applicable Regulatory Agencies.

**Cross Connection:** A physical connection between any part of a water system used or intended to supply water for drinking purposes and any source or system containing water or substance that is not or cannot be approved as safe, wholesome and potable for human consumption. This includes direct piping between the two systems, regardless of the presence of valves, Backflow Prevention Devices, or other appurtenances.

**Customer:** Any person, persons or firm including any Public utility, municipality or other Public body or institution issued a Recycled Water Use License by the Program. The Customer may be the Owner, tenant, or property manager as

21. RECYCLED WATER USE (Continued)

appropriate. The City's Rules and Regulations for the Use of Recycled Water apply to all Customers located within the City's boundaries.

**Customer Supervisor:** The Customer shall designate a Customer Supervisor with the approval of the Program to provide a liaison with the Program, the City, and Water Utility. This person shall be available to the Program at all times, shall have the authority to carry out any requirements of the Water Utility, the City and the Program, and shall be responsible for the installation, operation and maintenance of the Recycled and Potable Water systems and also prevention of potential hazards.

**Infiltration Rate:** The rate at which the soil will accept water as applied during irrigation, expressed in inches per hour.

**Inspector:** Any person authorized by the Water Utility, the City, the Program or the local health agencies to perform inspections on or off the Customer's site before construction, during construction, after construction and during operation.

**Intermittently Pressurized Line:** Any irrigation piping downstream of the last valve.

**Irrigation Period:** The time, from start of water flow to cessation, which a specific area receives Recycled Water by direct irrigation application, no matter how often the specific area is irrigated, e.g., length of the duty cycle.

**Irrigation Use:** An approved use of Recycled Water for landscape irrigation as defined under the California Code of Regulations ["CCR"], Title 22, Division 4, Article 4.

**Landscape Impoundment:** A body of recycled used for aesthetic enjoyment or which otherwise serves a function not intended to include routine Public contact.

**Non-Potable Water:** Water that has not been treated for human consumption in conformance with the latest edition of the United States Public Health Service Drinking Water Standards, the California Safe Drinking Water Act, or any other applicable standards.

**Off-Site:** Designates or relates to Recycled Water facilities up to and including the water meter.

**On-Site:** Designates or relates to facilities owned and operated by a Customer.

**Operations Personnel:** Any employee of a Customer, whether permanent or temporary, or any contracted worker whose regular or assigned work involves the supervision, operation or maintenance of equipment on any portion of On-Site facilities using Recycled Water.

21. RECYCLED WATER USE (Continued)

**Operator:** Any person, persons or firm, who, by entering into an agreement with a Customer, is responsible for operating On-Site facilities.

**Owner:** Any holder of legal title, contract purchaser, or lessee under a lease with an unexpired term of more than one (1) year, for property for which Recycled Water Service has been requested or established.

**Point of Connection:** This is the point where the Customer's system ties to the Water Utility's system. This is usually at the water meter at the Service Connection.

**Ponding:** Retention of Recycled Water on the surface of the ground or other natural or manmade surface for a period following the cessation of an approved Recycled Water use activity.

**Potable Water:** That water that is pure and wholesome, does not endanger the lives or health of human beings, and conforms to the latest edition of the California Safe Drinking Water Act, or other applicable standards. Potable Water includes potable fire service without an approved Backflow prevention assembly.

**Public:** Any person or persons at large who may come in contact with facilities and/or areas where Recycled Water is approved for use.

**Rate and Fee Schedule:** The schedule of all rates, charges, fees and assessments to be made concerning the use of Recycled Water served by the Water Utility as approved or as amended by the City Council.

**Recycled Water:** Non-Potable Water that is highly treated to the CCR, Title 22, Division 4, of the Environmental Health Water Reclamation Criteria and used for approved purposes other than drinking water.

**Recycled Water Use License:** A license issued by the Program to the Customer, which outlines monitoring, self-inspection, reporting, and site-specific requirements. This license is required by the California RWQCB for the use of Recycled Water.

**Reduced Pressure Principal Backflow Prevention Device:** A type of Backflow Prevention Device, usually installed near a water meter, which prevents Backflow by a combination of two check valves and a pressure differential relief valve.

**Regulatory Agencies:** Those Public agencies legally constituted to protect the Public health and water quality, such as the State DHS, the State RWQCB and the County EHS.

21. RECYCLED WATER USE (Continued)

**Restrained Joint:** Mechanically restrained pipe joint; also, solvent welded for PVC joints.

**Runoff:** When Recycled Water is allowed to drain outside the approved irrigation area.

**Santa Clara County Environmental Health Services:** This agency is the local health protection agency for most areas of Santa Clara County.

**Service:** The furnishing of Potable or Recycled Water to a Customer through a metered connection to the on-site facilities.

**Standard Pipe Length:** 18 to 20 feet.

**State of California Department of Health Services.** Shall be the State of California Department of Health Services, Drinking Water Field Operations Branch - Santa Clara District.

**Unauthorized Discharge:** Any release of Recycled Water that violates the Rules and Regulations of the Water Utility, the City, the Program or any applicable Federal, State or local statutes, regulations, ordinances, contracts or other requirements.

**Violation:** Non-compliance with any condition or conditions of the User Agreement by any person, action or occurrence, whether willfully or by accident.

**Water Utility:** The Water Utility and the City are one and the same.

**Windblown Spray:** Dispersed, airborne particles of Recycled Water that can be transmitted through the air to locations other than those approved for the direct application of Recycled Water.

21.C **SUMMARY OF ON-SITE INSTALLATION REQUIREMENTS**

21.C.1 On-Site installation requirements are described in detail in the Program's Rules and Regulations for Design and Operation of On-Site Recycled Water Facilities. However, the following is a summary of the basic requirements:

21.C.2 **No Cross-Connections.** No Cross-Connections are allowed between the Recycled Water system and the potable water system.

21.C.3 **Backflow Preventers.** In order to protect the Public drinking water system from accidental Cross-Connections, a reduced pressure principal Backflow Prevention Device is required at all **potable** meters on a site

21. RECYCLED WATER USE (Continued)

where Recycled Water is present.

In most cases, Backflow Prevention Devices are **not** required on the **Recycled Water** Service. However, where there is a particular threat to the quality of the Recycled Water, such as a direct connection to an industrial process or an impoundment of water, the Program may require a Backflow Prevention Device on the Recycled Water Service.

- 21.C.4 **No Hose Bibs.** Generally, hose bibs are not allowed on the Recycled Water system. In most cases, hose bibs can be replaced by quick coupling valves.
- 21.C.5 **No Runoff.** The irrigation system must be configured and operated to prevent runoff outside the Approved Use Area (the boundaries of the site).
- 21.C.6 **No Ponding.** The irrigation system must be configured and operated so that Ponding does not occur. This does not apply to approved and intended impoundments.
- 21.C.7 **No Windblown Spray.** The irrigation system must be configured and operated to prevent Windblown Spray from passing outside the approved area.
- 21.C.8 **Pipe Identification.** All new Recycled Water piping below or above grade and all existing piping above grade must be labeled with purple tape with the imprinted words “CAUTION - RECYCLED WATER”. Purple colored pipe with the required wording is an acceptable alternative.
- 21.C.9 New above grade Potable Water piping used for drinking water systems must also be labeled with blue tape and the words “**POTABLE WATER.**”
- 21.C.10 **Horizontal Pipe Separation.** Where possible, a minimum horizontal separation of ten feet between parallel buried Recycled and Potable Water pipelines should be maintained. If a ten foot horizontal separation cannot be maintained, then four foot minimum separation is allowed with Restrained Joint pipe. In no case shall a horizontal separation of less than four feet or same trench construction be allowed.
- 21.C.11 **Vertical Pipe Separation.** Recycled Water constant water pressure pipelines must be a minimum of 12 inches below the Potable Water pipelines. Recycled Water constant pressure pipelines are allowed over potable pipelines with a minimum of 12 inches vertical separation if a

21. RECYCLED WATER USE (Continued)

full standard pipe length is centered over the crossing, or the recycled pipeline is sleeved for the same length. Intermittently pressurized Recycled Water pipelines are allowed over potable pipelines with a minimum of 12 inches vertical separation.

21.C.12 **Signs.** Signs must be posted in conspicuous areas On-Site which contain the words “RECYCLED WATER - DO NOT DRINK - NO TOMAR” indicating that Recycled Water is used for irrigation (or other) purposes. Generally, signs must be located at all entrances to the facility or use area.

21.C.13 **Warning Tags, Stickers and Labels.** All valve boxes (automatic and manual), quick couplers, Recycled Water storage tanks, air/vacuum relief valves, pressure reducing valves, pumps, Backflow Prevention Devices, system controller boxes, or other appurtenances on the Recycled Water system must be labeled with warning tags, stickers or other labels. The labels, tags or stickers must include the words “RECYCLED WATER - DO NOT DRINK - NO TOMAR” on a purple background.

21.C.14 **On-Site (Land) Observation Reports.** At least once a year the site must be inspected for the items listed below while the system is in use. The observations must be submitted to the Program on a report form. The Customer may be required to perform this inspection, or, in some cases, the Program may perform the inspection. The items for the inspection are as follows:

- 21.C.14.(a) Is there evidence of runoff of Recycled Water from the site? Show affected area on a sketch and estimate volume.
- 21.C.14.(b) Is there an odor of wastewater origin at the irrigation site? If yes, indicate apparent source, characterization, direction of travel, and any Public use areas or Off-Site facilities affected by the odors.
- 21.C.14.(c) Is there evidence of Ponding of Recycled Water, and/or evidence of mosquitoes breeding within the irrigation due to ponded water?
- 21.C.14.(d) Are warning signs, tags, stickers, and above ground pipe markings properly posted to inform the Public that irrigation water is Recycled Water, which is not suitable for drinking?
- 21.C.14.(e) Is there evidence of leaks or breaks in the irrigation system piping or tubing?
- 21.C.14.(f) Is there evidence of broken or otherwise faulty drip irrigation system emitters or spray irrigation sprinklers?
- 21.C.14.(g) What corrective actions are being taken to correct any problems noted above?

21. RECYCLED WATER USE (Continued)

- 21.C.15 The Customer may also be required to conduct a visual inspection of the system during the off-season. Specific requirements will be included in the Recycled Water Use License.
- 21.C.16 **Emergency Cross-Connection Response Plan.** If a Cross-Connection or Backflow incident occurs between the Potable and Non-Potable Water systems, an emergency response plan must be implemented.

21.D **FEES AND LICENSE**

- 21.D.1 **Recycled Water Use License.** The State RWQCB requires that a Recycled Water Use License be issued by the Program to all Recycled Water Customers within the Program area. The Recycled Water Use License indicates any special site-specific requirements in addition to the requirements specified in this document. The Application for a Recycled Water Use License is submitted to the City or the Program with the On-Site Recycled Water Service Plans. The Program processes the application and issues a Recycled Water Use License with final approval for the use of Recycled Water at the site. The Applicant is responsible to obtain all necessary permits and pay all associated fees. The Applicant should contact the City for information on the cost of permits.
- 21.D.2 **Application for Recycled Water Services.** The Water Utility also requires an Application for Recycled Water Service, similar to application for potable Water Service.

21.E **THE CITY AS THE LOCAL AUTHORITY**

- 21.E.1 The City is the entity that has the responsibility of enforcing these Rules and Regulations for the end use of Recycled Water. The City has authority to issue plumbing permits, building requirements, and planning criteria.
- 21.E.2 The Rules and Regulations enforced by the City are derived from those established by the State RWQCB, the State DHS, County EHS, the Program and the City. These Rules and Regulations govern certain permitted uses of Recycled Water. All facilities using Recycled Water shall be designed and operated to meet the standards of the local governing codes, rules and regulations.

21.F **AUTHORIZED USES FOR RECYCLED WATER**

The uses of Recycled Water may include, but not by way of limitation: landscape irrigation; agricultural irrigation; construction water; industrial process water; water for flushing toilets and urinals in high-rise buildings; replacement water in cooling towers; and recreational impoundments. Each such use must be considered for approval by the City on a case-by-case basis, and the City may determine in its discretion whether it is necessary or desirable to furnish Recycled Water for the specific use involved. Determinations as to specific uses to be allowed shall be in accordance with the standards of treatment and water quality requirements set forth in CCR, Title 22, Division 4, of the California Administrative Code. Prior to approving such uses, the City may, in its discretion, set forth specific requirements as conditions to providing such services and/or require specific prior approval from the appropriate Regulatory Agencies.

21.G **NON-APPROVED USE AREAS**

- 21.G.1 **Runoff Conditions.** The irrigation systems shall be designed, constructed and operated to prevent runoff outside the Approved Use Area.
- 21.G.2 **Ponding Conditions.** The irrigation systems shall be designed, constructed and operated to minimize Ponding outside or within the Approved Use Area. This does not apply to approved impoundments such as decorative water features, golf course water-hazards or lakes. At no time shall Recycled Water be applied at a rate greater than the soil infiltration rate.
- 21.G.3 **Windblown Spray Conditions.** The irrigation systems shall be designed, constructed and operated to minimize Windblown Spray from passing outside the Approved Use Area.
- 21.G.4 **Unapproved Uses.** Use of Recycled Water for any purposes other than those explicitly approved by the Water Utility in conformance with the Rules and Regulations of the Program, the State DHS, the County EHS, or the State RWQCB, or use of Recycled Water in areas other than those specifically shown on the approved plans, is strictly prohibited.
- 21.G.5 **Disposal in Unapproved Areas.** Disposal of Recycled Water for any purpose, including approved uses, in areas other than those explicitly approved in the current effective Recycled Water Use License issued by the Program and without the prior knowledge and approval of the appropriate Regulatory Agencies, is strictly prohibited.



21. RECYCLED WATER USE (Continued)

21.H **AMENDMENTS**

From time to time there may be amendments to the existing Rules and Regulations and design manual. These amendments may be made without the consent of the Customer. These amendments will be enforced upon their effective date.

21.I **PROTECTION OF PUBLIC HEALTH**

The Water Utility, the City and the Program reserve the right to take any action necessary with respect to the operation of the Customer's Recycled Water system to safeguard the Public health.

21.J **RIGHT TO TERMINATE SERVICE**

21.J.1 If at any time during construction or operation of the Recycled Water system, real or potential hazards are evidenced, such as Cross-Connections with the potable system, improper tagging, signing, or marking, or unapproved/prohibited uses, the Water Utility reserves the right and has the authority to terminate immediately, without notice, Recycled Water Service in the interest of protecting the Public health. The Water Utility may elect to temporarily replace the Recycled Water supply water with potable water only after the Customer's Recycled Water system has been disinfected and approval has been granted by the Program and the State DHS. All modifications required to replace the Recycled Water supply with Potable Water shall be at the Customer's expense.

21.J.2 The Customer has the right to terminate service if there are no longer suitable uses at that site. The Customer cannot substitute Potable Water where Recycled Water can be used.

21.K **SEVERABILITY**

If any section, subsection, clause, or phrase of these Rules and Regulations is for any reason held to be invalid or unconstitutional, such decision shall not affect the remaining portions of these Rules and Regulations. The City Council declares that it would have passed said Rules and Regulations by section, subsection, sentence, clause, or phrase thereof.

## **22. DESIGN, INSTALLATION AND INSPECTION OF SYSTEMS FOR USE OF RECYCLED WATER**

### **22.A DESIGN APPROVAL**

Before the construction of any new Recycled Water system, major modifications of an existing Recycled Water system, or retrofit of an existing system for Recycled Water use, On-Site Recycled Water Service Plans must be prepared by the Customer and approved by the Program and the State DHS. Approval shall be contingent upon evidence that all applicable design requirements, rules and regulations for a Recycled Water system are satisfied (see *Basis for Design Review Criteria* below).

### **22.B REQUIRED ON-SITE RECYCLED WATER SERVICE PLANS**

Plans must be stamped by a registered landscape architect or civil engineer and include, but not be limited to, the following:

- 22.B.1 Site plan drawn to scale which clearly shows the boundaries of the intended use area, adjacent streets, and locations of all major improvements on the site, water meters (Recycled Water and Potable Water), Backflow Prevention Devices, drinking fountains, and all Public facilities supplied with Recycled or Potable Water Service. Public facilities include, but are not limited to, restrooms, outdoor eating areas, snack bars, swimming pools, wading pools, decorative fountains and showers. If there are no Public facilities located in the defined use area, then a note on the plans must indicate that no Public facilities exist. Additionally, any wells, lakes, ponds, reservoirs, or other water impoundments located On-Site or within 100 feet of the site must be shown on the site plan.
- 22.B.2 Piping plan which shows the complete potable and Recycled Water systems. All sources of Recycled Water and Potable Water must be indicated on the plan. The location and type of all existing and new Backflow Prevention Devices and water meters must be clearly marked on the piping plan. For existing facilities converting to Recycled Water use, the piping plan must indicate which piping and other devices are existing and which piping and other devices will be installed as part of the retrofit work. The proper separation requirements between Potable and Recycled Water lines (for new piping) must be indicated. The piping plan can be combined with the site plan if space permits.
- 22.B.3 Detail drawings of areas where special installation or retrofit procedures are required, such as cutting and capping to separate potable and recycled systems, installation of Backflow Prevention Devices, special construction where pipe separation criteria cannot be met, etc.

22. DESIGN, INSTALLATION AND INSPECTION OF SYSTEMS FOR USE OF  
RECYCLED WATER (Continued)

- 22.B.4 Any other items required by the Design, Installation, and Inspection Criteria section of the Customer On-Site Manual, and Section 24. C. of this document.
- 22.B.5 Preparation of On-Site Recycled Water Service Plans does not exempt the Applicant from submitting other On-Site improvement plans normally required by the City. Other improvement plans required by the City must still be submitted in accordance with the City's standard procedures.

22.C **BASIS FOR DESIGN REVIEW CRITERIA**

- 22.C.1 Review of On-Site Recycled Water Service Plans conducted by the Program and the State DHS will consist of checking for conformance with various regulations and guidelines governing distribution of Recycled Water. Even though the City/Program and the State DHS perform a plan check, the Applicant is not relieved of responsibility to meet all requirements. A brief description of this criteria is provided below. Copies of these criteria will be provided by the City or the Program upon request.
- 22.C.2 ***CCR, Title 22, Division 4, Chapter 3, "Water Reclamation Criteria"***. These regulations are written by the State DHS and specify the Approved Uses and use area requirements, such as hose bib restrictions, prohibition of irrigation near wells, etc. These regulations govern both the Water Utility's distribution system as well as the Customer's On-Site system.
- 22.C.3 ***CCR, Title 17, "Drinking Water Supply - Backflow Prevention"*** CCR, Title 17 specifies requirements intended to protect the Public drinking water supply from contamination. Some requirements specified in CCR, Title 17 include Backflow Prevention Devices, designation of a Customer Supervisor, and Cross-Connection testing requirements.
- 22.C.4 ***American Water Works Association (AWWA), California-Nevada Section, Guidelines for Distribution of Non-potable Water***. This document provides recommended guidelines for planning, designing, constructing, and operating Non-Potable Water systems, including Recycled Water systems. The guidelines themselves are not regulations but many agencies have adopted them as general requirements. The document covers both installation of the Water Utility distribution systems and On-Site use systems.

- 22.C.5 **International Association of Plumbing and Mechanical Officials (IAPMO) Uniform Plumbing Code, Appendix J.** Appendix J of the Uniform Plumbing Code sets forth requirements when Recycled Water is used within buildings in a dual-plumbed system for non-potable domestic uses such as toilet and urinal flushing. This section of the Uniform Plumbing Code does not apply to irrigation sites, where the Recycled Water system is located outside buildings, or industrial sites, where the Recycled Water is used for non-domestic industrial purposes. In addition, the pipe separation regulations indicated in this Guide are different than and take precedence over the Appendix J requirements. NOTE: Appendix J has not been adopted by Santa Clara and serves only as a reference.

## 22.D **SUMMARY OF DESIGN REVIEW CRITERIA**

Although the plan review conducted by the Program, the State DHS and/or the City may include checking for compliance with any of the existing regulations or guidelines referenced above, the following summaries are provided to give the designer of the Recycled Water system a general idea of the major items which will be checked during plan review. The summary is compiled as a “punch list” so that it can easily be referenced by the plan designer. However, compliance with every item on the punch list does not guarantee that the plans will be approved without comment since regulations and policies may change and some sites may require special provisions. In addition, even though the Program, the State DHS and/or the Local Authorities perform a plan review, the Applicant is still responsible for meeting all applicable requirements, even if those requirements are not shown on the approved plans. Please note that the plan requirements are slightly different for new facilities and existing facilities converting to Recycled Water use.

- 22.D.1 Do plans include a site/piping plan and details of connection points as indicated under *Required Plans* (Section 22.B)?
- 22.D.2 Are all items listed under *Required Plans* (Section 22.B) shown on the site/piping and details plans?
- 22.D.3 Is the use area shown on the site an Approved Use Area?
- 22.D.4 Is the total Recycled Water irrigation area included to the nearest 10th of an acre?
- 22.D.5 At **new facilities**, are all On-Site Recycled Water pipelines located ten feet horizontally from Potable Water pipelines where possible (minimum of four foot horizontal separation allowed if special construction details are incorporated)?
- 22.D.6 At **new facilities**, where Recycled and Potable Water lines cross, are the

22. DESIGN, INSTALLATION AND INSPECTION OF SYSTEMS FOR USE OF  
RECYCLED WATER (Continued)

pressurized Recycled Water pipelines located at least one foot below the Potable Water lines?

- 22.D.7 At **existing facilities** converting to Recycled Water use, does all new piping meet the Potable/Recycled Water pipeline separation criteria indicated above?
- 22.D.8 Do the plans indicate that Recycled Water and Potable Water systems are completely separated and there is no common trenching?
- 22.D.9 At **existing facilities** converting to Recycled Water use, are all locations where future Recycled Water piping must be separated from the Potable Water piping clearly indicated on the plans?
- 22.D.10 Are the proper Backflow Prevention Devices shown in the proper location for protection of the Public Potable Water system? Reduced Pressure (RP) principal Backflow prevention assemblies should be shown located as close as possible to all Potable Water meters and at least 12 inches above grade.
- 22.D.11 If the On-Site Recycled Water system is interconnected with industrial process piping, fertilizer injection systems, or a non-potable drinking water source (such as an irrigation water storage pond), is the proper Backflow Prevention Device shown in the proper location for protection of the Public Recycled Water distribution system? In such cases, usually an RP device is required at the Recycled Water meter, at least 12 inches above grade.
- 22.D.12 Are the proper Backflow Prevention Devices shown in the proper locations for protection of On-Site Potable Water supply per standard UPC and CCR, Title 17 requirements? Though not specifically related to Recycled Water, these devices should be shown on the plans. Backflow Prevention Devices are required at non-air-gap Points of Connection to ponds, wading pools, swimming pools, fountains, etc., where the impoundment is supplied by the potable water on-site piping. Usually atmospheric vacuum breakers located near the Point of Connection are adequate, unless there is a valving downstream of the protection device, in which case pressure vacuum breakers are required.
- 22.D.13 If there are wells located On-Site or near the use site, are the wells separated from all Recycled Water irrigation use areas by at least 50 feet and from all Recycled Water impoundments by at least 100 feet?

22. DESIGN, INSTALLATION AND INSPECTION OF SYSTEMS FOR USE OF  
RECYCLED WATER (Continued)

- 22.D.14 If plans are used for construction, do plans show all necessary details to properly construct the system?
- 22.D.15 Do plans identify that materials are appropriate for Recycled Water use? (For example, purple pipe, proper signing and tagging, etc.)
- 22.D.16 Do plans identify works requiring inspection by the Program representatives?
- 22.D.17 Do plans include a detail for Air Gap if a backup source is used?
- 22.D.18 Do plans specify no hose bibs on the Recycled Water system?

22.E **PRELIMINARY CROSS-CONNECTION TEST EXISTING SITES**

At all existing sites which are converting to Recycled Water use, a preliminary Cross-Connection test may be required and shall be coordinated by the Customer prior to retrofit work or construction. The Customer must notify the Program prior to the Cross-Connection test so that the Program, the Water Utility, the City, and regulatory agency representatives can be present if they wish. The preliminary Cross-Connection test should follow the general cross-connection testing guidelines outlined in Section 22.I. The purpose of the test is to determine if there are any unknown connections between the existing irrigation system and the domestic water system prior to construction. If unknown connections are discovered, then further testing or potholing must be conducted in order to determine where the connections are located. The retrofit plans must be revised to reflect any changes required to eliminate the connections, and the revised plans must be resubmitted to the Program and the State DHS for review. At new development sites, a preliminary Cross-Connection test is generally not necessary since the systems have been designed for Recycled Water use.

22.F **CONSTRUCTION INSPECTION**

The State RWQCB requires that the Program, the City, or designated representatives conduct On-Site inspections during the construction phase to ensure that materials, installation and procedures are in accordance with the approved plans, specifications, and all applicable regulations. Accordingly, the Customer shall notify the Program of the schedule for all phases of planning, construction and start up so that inspections can be scheduled.

**22.G FIELD TESTING AND INSPECTION**

All systems shall conform to the requirements of the UPC Sections 103.5.1 through 103.5.4.2 except intermittent pressure piping. During the coverage test with Recycled Water, the irrigation system shall be inspected for proper use of full, half, and quarter sprinkler heads, proper atomizing, and irrigation spray on non-Approved Use Areas.

**22.H TEMPORARY CONNECTION TO POTABLE SERVICE**

A jumper to the potable system is allowed up to and during the final Cross-Connection test. At that time the jumper shall be replaced by the Recycled Water meter. Jumpers providing water from the Public Recycled Water system into the On-Site Recycled Water system are prohibited at all times.

**22.I FINAL CROSS-CONNECTION TEST**

The Customer must conduct a final Cross-Connection test before connecting the Customer's Recycled Water system to the Water Utility's Recycled Water system at any use-site where both Recycled and Potable Water are present in separate piping systems. This test is to ensure the absolute separation of the recycled and potable water systems. The Customer must notify the Program at least 48 hours prior to the test so that members of the appropriate agencies may be present. The Cross-Connection test shall be done under the supervision of the Program representatives by an AWWA-certified Cross-Connection control specialist hired by the Applicant. The Customer Supervisor (see *Designation of Customer Supervisor*, herein) must be present at the test. Periodic testing must be performed after that (see *Periodic Cross-Connection Testing Program*, herein). A written report documenting the test results shall be submitted by the certified Cross-Connection control specialist to the Customer Supervisor and the Program following completion. The following are general test guidelines and may be modified with the approval of the Program.

**22.I.1 General Cross-Connection Test Procedures**

Cross-Connection tests shall be performed as specified in the UPC Appendix J 8 (2) and J 8 (3), with the exception that intermittent piping will not be activated and pressurized as specified in Appendix J 8 (2)(vi), and that the required pressurization time will be one (1) hour or as otherwise specified by the Cross-Connection specialist. The City of Santa Clara's Cross-Connection test procedures are summarized as follows:

22. DESIGN, INSTALLATION AND INSPECTION OF SYSTEMS FOR USE OF  
RECYCLED WATER (Continued)

**22.I.2 Minimum Requirements for Cross-Connection Testing:**

The Cross-Connection test shall be done with the Customer's Site Supervisor present, under the supervision of a City representative by an AWWA-certified Cross-Connection control specialist. The Cross-Connection test shall include the following steps:

- 22.I.2.(a) For Premises with irrigation systems originally constructed with a potable service, all Potable Water supply points to the irrigation system are to be disconnected and capped. These points shall remain open to view until after a visual inspection by the City. This step may be deferred until after the following steps are completed, that is, the Cross-Connection test may be completed with Potable Water being supplied to the recycled piping.
- 22.I.2.(b) When the recycled service is ready to be activated, while still OFF: City Inspectors shall determine that there is no water being supplied to the irrigation system. This may be by use of a pressure gauge installed on the normally pressurized portion of the irrigation system, or by a visual inspection of the irrigation sprinkler heads. This procedure is to insure no potable water source is supplying water to the irrigation system.
- 22.I.2.(c) After the Recycled Water service is activated and turned ON, the potable service to the property is to be turned OFF and de-pressurized. A pressure gauge will be connected to the potable service at the building to measure the potable system pressure during this test. While the potable system is not in use, there shall be no observed increase in pressure for at least 15 minutes. For multi-story buildings, maximum pressure at the ground floor is not to exceed static pressure equal to elevation pressure to the top floor or roof of the building (the highest point of the internal plumbing).

**22.J FINAL INSPECTION**

The State DHS requires a final On-Site inspection to be conducted by the Program or its designated representatives. Accordingly, a final inspection will be performed by the Program or its designated representatives before the Recycled Water system is connected to ensure all requirements have been met. This inspection will be coordinated with the final Cross-Connection test so that the inspection can be done with Potable Water charging the irrigation system at Recycled Water pressure prior



22. DESIGN, INSTALLATION AND INSPECTION OF SYSTEMS FOR USE OF  
RECYCLED WATER (Continued)

to connection of Recycled Water. The Program's inspector will check to see that the proper equipment was used and that all required tags, labels, and signs are in place. This inspection shall precede the coverage test which will be performed with Recycled Water. This will allow the inspector to determine if conditions which create runoff or Windblown Spray outside the Approved Use Area, Ponding within the use area do not exist. Spray patterns will be checked to see they do not encroach upon Public facilities such as drinking fountains, outside eating areas, or areas outside the Approved Use Area.

22.K **FINAL APPROVAL**

Final approval must be granted by the Program before Recycled Water can be supplied to the site. Final approval will be granted when construction has been completed in accordance with approved plans and specifications, all Cross-Connection tests have been performed, a final On-Site inspection has been conducted, and all requirements have been met satisfactorily. After the Recycled Water Use License has been finalized by the Program, the Water Service Agreement is approved by the Water Utility, and all applicable fees have been paid, the Water Utility will authorize the installation of the Recycled Water meter. (The coverage test will be performed after the meter has been set) the State DHS will be forwarded a copy of all test and inspection reports as well as notification that Recycled Water Service has been started. During the lifetime of the Recycled Water system, the City or the Program will periodically inspect the Recycled Water system to ensure compliance with all applicable rules and regulations (see *Annual Self-Inspections*, herein). Additionally, the Customer shall conduct a Cross-Connection test every four years if required by the Recycled Water Use License.

22.L **RECORD DRAWINGS**

All conceptual or major design changes shall be approved before implementing the change in the construction contract. Record drawings shall be prepared to show the recycled system as constructed and shall include all changes in work constituting departures from the original contract drawings including those involving both constant pressure and Intermittent-Pressure Lines and appurtenances.

## **23. OPERATION AND MAINTENANCE OF SYSTEMS FOR USE OF RECYCLED WATER**

### **23.A CONDITIONS OF SERVICE**

All requirements outlined in this section shall be Conditions of Service, unless modified in the Recycled Water Use License. By accepting Recycled Water Service, the Customer agrees to comply with all Conditions of Service.

### **23.B SYSTEM RESPONSIBILITY**

23.B.1 It shall be the responsibility of the Customer to maintain and operate their Recycled Water system downstream of the Service Connection. It is the responsibility of the Customer to ensure that the Recycled Water is being applied in accordance with all rules and regulations regarding the use of Recycled Water. The Customer is also responsible for the following:

- 23.B.1.(a) Maintaining the On-Site Recycled Water system, signs, markings, and tags in accordance with all rules and regulations.
- 23.B.1.(b) Ensuring all materials used during the repair and maintenance of the system are approved or recommended for Recycled Water use.
- 23.B.1.(c) Obtaining all permits and payment of all fees required for the operation and maintenance of the Customer's Recycled Water system. Permitting and/or fee assistance may be available from the City or the Program.
- 23.B.1.(d) Reporting all Violations and emergencies to the required local governing agencies.
- 23.B.1.(e) Obtaining prior authorization from the Water Utility and the Program before making any modifications to the approved Recycled Water system. This includes converting any piping used at any time for conveyance of Recycled Water back to Potable Water, that is switching a Recycled Water system to a backup Potable Water system. The Program will notify the Customer if approval is also required from any additional regulatory agencies and if disinfection procedures are required.

23. OPERATION AND MAINTENANCE OF SYSTEMS FOR USE OF RECYCLED WATER (Continued)

23.C **HOURS OF OPERATION**

Hours of operation shall be specified in the Recycled Water Use License.

23.D **DESIGNATION OF CUSTOMER SUPERVISOR**

It is the responsibility of the Customer to provide surveillance and supervision of the Recycled Water system in a way that assures compliance at all times with current regulations. In order to accomplish this, the Customer shall designate, with the approval of the Program, a Customer Supervisor to provide liaison with the City, the Water Utility and the Program. This person may represent the Owner, tenant, or property manager as appropriate; however he/she must be a permanent employee responsible for the Recycled Water system at the site who is available at all times and has the authority to carry out any requirements of the Program, the City, and the Water Utility. The Customer Supervisor should be permanently stationed at the use site, or at a minimum make frequent visits to the use site as specified in the Recycled Water Use License. Installation, operation, maintenance, and prevention of potential hazards on the Recycled and Potable Water systems are the responsibility of the Customer Supervisor. The Customer Supervisor's primary responsibility is to ensure that there are no Cross-Connections made between the Potable and Recycled Water systems. The Customer Supervisor must be present at the final cross-connection test and periodic Cross-Connection tests. The Customer Supervisor shall inform the Program of all failures, Violations, and emergencies that occur involving the Recycled or Potable Water systems. The Customer Supervisor is also responsible to be knowledgeable of the provisions contained in CCR, Title 17 and CCR, Title 22 relating to the safe use of Recycled Water and the maintenance of accurate records. The Customer Supervisor must be familiar with the basic concepts of Backflow and Cross-Connection prevention, system testing and relating emergency procedures. The Customer must notify the Program immediately of any change in personnel for the Customer Supervisor position.

23.E **PERSONNEL TRAINING**

It is the responsibility of the Customer to train all operations personnel, in order to be familiar with the use of Recycled Water. Any training program should include, but not limited to, the following:

- 23.E.1 Operations personnel must be aware of the emergency procedure.
- 23.E.2 Operations personnel must be aware that Recycled Water, though highly treated, is Non-Potable Water.
- 23.E.3 Operations personnel must understand the requirements and restrictions pertaining to Ponding, Windblown Spray and Runoff.

23. OPERATION AND MAINTENANCE OF SYSTEMS FOR USE OF RECYCLED WATER (Continued)

- 23.E.4 Good personal hygiene must be followed.
- 23.E.5 **Recycled Water shall never be used for human consumption.**
- 23.E.6 Operations personnel must understand that working with Recycled Water is safe if good common sense is used and appropriate regulations are followed.
- 23.E.7 Operations personnel must understand that there is **never** to be a connection between the Recycled Water system and the Potable Water system.
- 23.E.8 Operations personnel must understand the health/safety aspects of CCR, Title 17 and CCR, Title 22 requirements.
- 23.E.9 All new employees shall be trained in the proper use of Recycled Water. Supervisory personnel and the Customer Supervisor should be held accountable to ensure that employees are not using Recycled Water carelessly or hazardedly.

23.F **VEHICLE IDENTIFICATION**

- 23.F.1 Any vehicle used to transport Recycled Water shall be clearly marked with labels or signs. These labels or signs shall contain the words “RECYCLED WATER - DO NOT DRINK - NO TOMAR” in black two-inch high minimum letters on a purple background. The Program may also require the label to include translations into foreign language(s) if appropriate, as specified in the Recycled Water Use License. One label or sign shall be placed on the tank closest to the driver’s door. One label or sign shall be placed on the rear surface of the tank. All labels and signs shall be placed where they can easily be seen by the personnel using the vehicle.
- 23.F.2 The “Do Not Drink” symbol (refer to the Customer On-Site Design Manual) shall be present on all vehicles used to carry Recycled Water. Any vehicles use for the transportation or storage of Recycled Water must not be reused for the transportation or storage of Potable Water.

23.G **MAINTENANCE**

- 23.G.1 To ensure the Recycled Water system ways remains in compliance, the Customer shall begin a preventative maintenance program to include, but not limited to, the following:

23. OPERATION AND MAINTENANCE OF SYSTEMS FOR USE OF RECYCLED WATER (Continued)

- 23.G.1.(a) Regular inspections shall be conducted by the Customer of the entire Recycled Water system including sprinkler heads, drip irrigation emitters, spray patterns, lakes, piping and valves, pumps, storage facilities, controllers, etc. Immediately correct any leaks, breaks, or discrepancies in license requirements.
- 23.G.1.(b) All warning signs, tags, stickers, and above grade pipe markings shall be checked for their proper placement and legibility. Replace damaged, unreadable or missing signs, tags, stickers, and pipe markings.
- 23.G.1.(c) Special attention should be given to spray patterns to eliminate Ponding, Runoff and Windblown Spray conditions. If runoff is noted, affected areas should be indicated on a sketch and the volume should be estimated. If unauthorized Ponding is detected, evidence of mosquitoes breeding within the Ponding should be noted and immediately eliminated.
- 23.G.1.(d) Establish and maintain an accurate record keeping system of all inspections, modifications and repair work.
- 23.G.1.(e) Broken sprinkler heads, faulty spray patterns, leaking pipes or valves, or any other noted condition which violates the use requirements shall be repaired immediately after the malfunction or condition becomes apparent.

23.H **ANNUAL SELF-INSPECTIONS AND REPORTS**

23.H.1 **Standard On-Site (Land) Observation Report.** The State RWQCB requires that the Recycled Water Customers in the Program conduct a standard observation inspection at least once a year at a time when the Recycled Water system is in use. In general, the standard observations correlate with the preventative maintenance self-inspections. The Customer must submit the results of the observations along with a description of any corrective actions taken in a written report to the Program (see *Sample Forms*). The schedule and deadlines for submittal of this report is indicated in the Recycled Water Use License. The seven items for inspection are as follows:

- 23.H.1.(a) Is there evidence of Runoff of Recycled Water from the site?  
Show affected area on a sketch and estimate volume.

23. OPERATION AND MAINTENANCE OF SYSTEMS FOR USE OF RECYCLED WATER (Continued)

- 23.H.1.(b) Is there an odor of wastewater origin at the irrigation site? If yes, indicate apparent source, characterization, direction of travel, and any Public use areas or Off-Site facilities affected by the odors.
- 23.H.1.(c) Is there evidence of Ponding Recycled Water, and/or evidence of mosquitoes breeding within the irrigation area due to ponded water?
- 23.H.1.(d) Are warning signs, tags, stickers, and above ground pipe markings properly posted to inform the Public that irrigation water is Recycled Water, which is not suitable for drinking?
- 23.H.1.(e) Is there evidence of leaks or breaks in the irrigation system piping or tubing?
- 23.H.1.(f) Is there evidence of broken or otherwise faulty drip irrigation system emitters or spray irrigation sprinklers?
- 23.H.1.(g) What corrective actions are being taken to correct any problems noted above?

23.H.2     **Off-Season Inspection Report.** The State RWQCB also requires that the Program Customers conduct a thorough inspection of all irrigation lines, sprinklers, and drip system emitters at least once a year during the dormant season. The findings of this inspection, along with any significant repairs or modifications must be submitted in a report to the Program (see *Sample Forms*). The schedule and deadlines for submittal of this report are indicated in the Recycled Water Use License.

23.I     **PERIODIC PROGRAM INSPECTIONS**

23.I.1     The State RWQCB also requires that the Program conduct periodic inspections of Customer Recycled Water use sites. These inspections shall include, at a minimum, the visual inspection of all Backflow Prevention Devices, pump rooms, exposed piping, valves, pressure reducing stations, Points of Connection, sprinklers, drip system emitters, controllers, lakes, storage facilities, signs, labeling, tags, etc. The Customer Supervisor's maintenance records shall be inspected to review all maintenance since the last inspection. The Program, the Local Authority, and RWQCB reserve the right to make unannounced inspections of the facility during reasonable hours of operation.

23. OPERATION AND MAINTENANCE OF SYSTEMS FOR USE OF RECYCLED WATER (Continued)

- 23.I.2 Upon completion of the inspection, a report form will be signed and dated by both the Customer Supervisor and the Program Inspector. The original shall be maintained by the Program with copies to the Customer Supervisor, the City, the Water Utility and any required regulatory agency.
- 23.I.3 Should a Cross-Connection be discovered during any inspection by the Customer or an outside Inspector, the **Emergency Cross-Connection Response Plan** shall be immediately invoked by the Customer Supervisor.

23.J **MODIFICATIONS**

- 23.J.1 No modifications shall be made by the Customer to any Recycled Water system without the prior approval of the Program. This includes modifications to the approved plans, or to an operational system. Detailed plans of any modifications must be submitted to the Program and the modifications inspected by the Program before being completed.
- 23.J.2 Emergency modifications or repairs can be made by the Customer to the system without the prior approval of the Program to prevent contamination, damage or a Public health hazard. As soon as possible after the modification but not to exceed three days, the Customer must notify the Program of the emergency modifications and file a written report.

23.K **PERIODIC CROSS-CONNECTION TESTING**

- 23.K.1 At dual-plumbed use sites (sites where the Recycled Water is used within a building in conjunction with a Potable Water system), the Customer shall be responsible for conducting a periodic Cross-Connection test as required in the Recycled Water Use License unless visual inspections reveal a requirement for more frequent testing. Generally the periodic Cross-Connection test for a dual-plumbed use site is required once every four years. This test shall be done by an AWWA-certified Cross-Connection specialist. The Program must be notified at least 48 hours in advance of the test so that a Program representative can be present. The Customer Supervisor must be present at the test. A sample Test Notification Form is located in *Sample Forms*. The following are general guidelines for periodic cross-testing and may be modified with the approval of the Program.
- 23.K.2 **Periodic Cross-Connection Test Procedures** Cross-connection tests shall be performed as specified in the UPC Appendix J 8 (2) and J 8 (3),

23. OPERATION AND MAINTENANCE OF SYSTEMS FOR USE OF RECYCLED WATER (Continued)

with the exception that intermittent piping will not be activated and pressurized as specified in Appendix J 8 (2)(vi), and that the required pressurization time will be one (1) hour or as otherwise specified by the Cross-Connection specialist.

23.L **SYSTEM NOT IN COMPLIANCE**

If at any time the Recycled Water system is found to be out of compliance, the Program shall issue an Order specifying the corrections required to bring the system into compliance. A site inspection shall be scheduled after a reasonable period of time to ensure compliance with the Order. If it is known or suspected that a Backflow incident or contamination has occurred, then the *Emergency Cross-Connection Response Plan* shall be invoked.

23.M **NOTIFICATION**

It is the responsibility of the Customer Supervisor to notify the Program of any failure or Cross-Connection in said Recycled Water or potable water system, whether or not he/she believes a Violation has occurred. It is also the responsibility of the Customer Supervisor to notify the Program of any violation that might occur because of any action the Customer personnel might take during the operation of said Recycled Water or Potable Water systems. If there are any doubts whether a Violation has occurred, it is the responsibility of the Customer Supervisor to report each occurrence to the Program so a decision can be made.

23.N **EMERGENCY PROCEDURE**

23.N.1 In case of a major earthquake, flood, fire, tornado, structural failure, or other incident which could likely damage the Recycled or Potable Water systems, the Customer Supervisor should inspect the domestic and Recycled Water systems for damage, as soon as, it is safe to do so. If either system appears damaged, the domestic or Recycled Water system with damage should be shut off at their Point of Connection. If the Customer Supervisor cannot inspect the site and damage is expected, then both water systems should be shut off at their points of connection. The Supervisor should immediately contact the Program for further instruction.

23.N.2 **Emergency Modifications.** Emergency modifications or repairs can be made by the Customer to said system without the prior approval of the Program to prevent contamination, damage or a Public health hazard. As soon as possible after the modification but not more than three days after the modification, the Customer shall notify the Program of the emergency modifications and file a written description of action taken.



23. OPERATION AND MAINTENANCE OF SYSTEMS FOR USE OF RECYCLED WATER (Continued)

- 23.N.3     **Unauthorized Discharge.** It is the responsibility of the Customer to report to the City all system failures that result in an unauthorized discharge of Recycled Water. An immediate oral report is required at which time the City will specify if a written report is required. The Customer must make every effort to contain the unauthorized discharge prior to discharge to the storm drains. Contact the Program for field review and disposal instructions.
- 23.N.4     **Contamination of Drinking Water.** In case of contamination of the Potable Water system due to a Cross-Connection on the Customer's Premises, the Program and State DHS shall be immediately notified by Customer. The Customer is to immediately invoke the *Emergency Cross-Connection Response Plan*.

23.O     **EMERGENCY CROSS-CONNECTION RESPONSE PLAN**

In the event that a Backflow incident or Cross-Connection is suspected or occurs, the following procedures shall be implemented immediately.

- 23.O.1     Notify the Water Utility and the State DHS by phone. This notification is to be followed by written notice within 24 hours. The written notice is to include an explanation of the nature of the Cross-Connection, date and time discovered, and the steps taken to mitigate the Cross-Connection(s).
- 23.O.2     Keep the Potable Water system pressurized and post "Do Not Drink" signs at all Potable Water fixtures and outlets.
- 23.O.3     Immediately shut down the Recycled Water supply to the facility at the meter.
- 23.O.4     Provide bottled water for employees until the Potable Water system is deemed safe to drink.
- 23.O.5     Collect water samples from the Potable Water system and perform a 24-hour bacteriological analysis. Water samples should be collected from the closest acceptable point to the Cross-Connection. The Water Utility may supply the appropriate sample bottles, obtain the samples, and arrange for laboratory analysis. See the *Water Utility Supplementary Guidelines* for additional information.
- 23.O.6     Identify the cause and location of Backflow and eliminate the Cross-Connection(s).

23. OPERATION AND MAINTENANCE OF SYSTEMS FOR USE OF RECYCLED  
WATER (Continued)

- 23.O.7 Conduct a Cross-Connection test as outlined in Section 22.E-K to verify that all Cross-Connections were eliminated.
- 23.O.8 Obtain approval from the Program and the State DHS before bringing the Recycled Water system back into service.
- 23.O.9 If the bacteriological analysis conducted in Step 5 is positive, chlorinate the Potable Water system maintaining a chlorine residual of at least 50 mg/l for 24 hours. Otherwise proceed to Step 11.
- 23.O.10 Flush the Potable Water system after 24 hours and perform standard bacteriological analysis.
- 23.O.11 If the results from Step 10 are acceptable, proceed to Step 12. Otherwise, repeat Steps 9-10.
- 23.O.12 Obtain final approval from the Program and the State DHS before removing signs.

23. OPERATION AND MAINTENANCE OF SYSTEMS FOR USE OF RECYCLED  
WATER (Continued)

**LOCAL CONTACTS**

*Site:* \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*Location:* \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*Customer  
Supervisor:* \_\_\_\_\_

*Work  
Phone:* \_\_\_\_\_

*Title:* \_\_\_\_\_

*Home  
Phone:* \_\_\_\_\_

23. OPERATION AND MAINTENANCE OF SYSTEMS FOR USE OF RECYCLED  
WATER (Continued)

**CROSS-CONNECTION TEST NOTIFICATION FORM**

(Sent by the Program)

***Test Date:***

***Test Time:***

***Site Name:***

***Site Address:***

**CITY OF SANTA CLARA WATER UTILITY**

***Contact Person:***

***Phone:***

***Agencies Notified:*** California Department of Health Services, Drinking Water Field  
Operations Branch - Monterey District

23. OPERATION AND MAINTENANCE OF SYSTEMS FOR USE OF RECYCLED  
WATER (Continued)

**CROSS-CONNECTION NOTIFICATION RSVP FORM**

(Returned by Customer)

*Site Address:*

*Test Date:*

*Agency/Company:*

*Representatives Attending:*

(Please return to requesting party within 48 hours prior to scheduled test)

23. OPERATION AND MAINTENANCE OF SYSTEMS FOR USE OF RECYCLED  
WATER (Continued)

**ANNUAL SELF-INSPECTION REPORT**

**Standard On-Site (Land) Observation Report**

OR

**Off-Season Inspection Report**

*Site:*

*Date:*

*Inspected by:*

*Title:*

=====

1. Is there evidence of runoff of recycled water from the site? Show affected area on a sketch and estimate volume:
2. Is there an odor of wastewater origin at the irrigation site? If yes, indicate apparent source, characterization, direction of travel, and any public use areas or off-site facilities affected by the odors.
3. Is there evidence of ponding of recycled water, and/or evidence of mosquitoes breeding within the irrigation area due to ponded water?
4. Are warning signs, tags, stickers, and above ground pipe markings properly posted to inform the public that irrigation is recycled water, which is not suitable for drinking?
5. Is there evidence of leaks or breaks in the irrigation system piping or tubing?
6. Is there evidence of broken or otherwise faulty drip irrigation system emitters or spray irrigation sprinklers?
7. What corrective actions are being taken to correct any problems noted above?

Signed: \_\_\_\_\_

Dated: \_\_\_\_\_

# WATER SERVICE AND USE RULES AND REGULATIONS No. 23

## 23. OPERATION AND MAINTENANCE OF SYSTEMS FOR USE OF RECYCLED WATER (Continued)

### RECYCLED WATER USE LICENSE - CUSTOMER APPLICATION

Today's Date:			
Tract No./APN:			
Facility Name:			
Location or Brief Legal Description:			
Mailing Address:			
Type of Development:			
Expected date to commence recycled Water Service (Month/Year)			
Owner:		Proposed Customer Supervisor:	
Address:		Address:	
City:		City:	
State:	Zip:	State:	Zip:
Phone: ( )		Work Phone ( )	
Contact:		Home Phone ( )	
		Alternate:	
Estimated Water Requirements	Acres	Average (AF/YR)	Peak Demand (GPM)
Landscape Irrigation:			
Park:			
Open Space:			
School:			
Industrial Use:			
Athletic Field:			
Brief description of use(s):			
Brief description of proposed Customer Supervisor's current responsibilities and familiarity with the future recycled water system:			

This is a new retrofitted system.

For retrofitted systems:

Water Utility: CITY OF SANTA CLARA

Account Number: \_\_\_\_\_

On-Site pumping **is not** required.

Is the potable system designed to operate as back-up: Yes No

## 24. WATER CONSERVATION IN LANDSCAPING

### 24.A **PURPOSE**

The purpose of these Rules and Regulations is to promote efficient water use through proper design, installation and management techniques appropriate to Santa Clara's growing conditions.

### 24.B **APPLICABILITY**

24.B.1 Except as provided in Subsection 24.B.2. below, these Rules and Regulations shall apply to:

- 24.B.1.(a) All new and rehabilitated landscaping for public agency projects and private development projects that require a permit; and
- 24.B.1.(b) Developer-installed landscaping in single-family and multi-family projects.

24.B.2 This section shall not apply to:

- 24.B.2.(a) Homeowner-provided landscaping at single-family and multi-family projects;
- 24.B.2.(b) Cemeteries;
- 24.B.2.(c) Registered historical sites;
- 24.B.2.(d) Any ecological restoration project that does not require a permanent irrigation system;
- 24.B.2.(e) Any project with a landscaped area less than 2,500 square feet; or
- 24.B.2.(f) Any project that uses, primarily, Recycled Water for irrigation purposes.

### 24.C **DEFINITIONS**

The terms used in this Section of these Rules and Regulations have the meaning set forth below:

**Antidrain Valve or Check Valve:** A valve located under a sprinkler head to hold water in the system so it minimizes drainage from the lower elevation sprinkler heads.

**Application Rate:** The depth of water applied to a given area, usually measured in inches per hour.

**Applied Water:** The portion of water supplied by the irrigation system to the landscape.



24. WATER CONSERVATION IN LANDSCAPING (Continued)

**Automatic Controller:** A mechanical or solid-state timer, capable of operating valve stations to set the days and length of time of a water application.

**Backflow Prevention Device:** A City-approved device that prevents Backflow into the City's water distribution system.

**Conversion Factor (0.62):** A number that converts the maximum applied water allowance from acre-inches per acre per year to gallons per square foot per year. The conversion factor is calculated as follows:

$$\begin{aligned}(325,829 \text{ gallons}/43,560 \text{ sq. ft.}/12 \text{ inches} &= 0.62) \\ 325,829 \text{ gallons} &= 1 \text{ acre-foot} \\ 43,560 \text{ square feet} &= 1 \text{ acre} \\ 12 \text{ inches} &= 1 \text{ foot}\end{aligned}$$

To convert gallons per year to 100 cubic feet per year, the City's billing unit for water, divide gallons per year by 748 (748 gallons = 100 cubic feet).

**Ecological Restoration Project:** A project where the site is intentionally altered to establish a defined, indigenous, historic ecosystem.

**Effective Precipitation or Usable Rainfall:** The portion of total precipitation that is used by the plants. Precipitation is not a reliable source of water but can contribute to some degree toward the water needs of the landscape. For the purpose of this document, "effective precipitation" is twenty-five percent (25%) of local annual mean precipitation.

**Emitters:** Drip irrigation fittings that deliver water slowly from the system to the soil.

**Established Landscape:** The point at which plants in the landscape have developed roots into the soil adjacent to the root ball.

**Establishment Period:** The first year after installing the plant in the landscape.

**Estimated Applied Water Use:** The portion of the Estimated Total Water Use that is derived from applied water. The Estimated Applied Water Use shall not exceed the Maximum Applied Water allowance. The Estimated Applied Water Use may be the sum of the water recommended through the irrigation schedule as referenced herein.

**Estimated Total Water Use:** The annual total amount of water estimated to be needed to keep the plants in the landscaped area healthy. It is based upon such factors as the local evapotranspiration (ET) rate, the size of the landscaped area, the

24. WATER CONSERVATION IN LANDSCAPING (Continued)

types of plants, and the efficiency of the irrigation system, as described herein.

**ET Adjustment Factor:** A factor of 0.8 that, when applied to reference Evapotranspiration, adjusts for plant factors and irrigation efficiency, two major influences upon the amount of water that needs to be applied to the landscape.

A combined plant mix with a site-wide average of 0.5 is the basis of the plant factor portion of this calculation. The irrigation efficiency for the purpose of the ET Adjustment Factor is 0.625.

**Evapotranspiration:** A quantity of water evaporated from adjacent soil surfaces and transpired by plants during a specific

**Flow Rate:** The rate at which water flows through the pipes and valves (gallons per minute or cubic feet per second).

**Hydrozone:** A portion of the landscaped area having plants with similar water needs that are served by a valve or set of valves with the same schedule. A Hydrozone may be irrigated or non-irrigated. For example, a naturalized area planted with native vegetation that will not need supplemental irrigation once established is a non-irrigated Hydrozone.

**Infiltration Rate:** The rate of water entry into the soil expressed as a depth of water per unit of time (inches per hour).

**Irrigation Efficiency:** The measurement of the amount of water beneficially used divided by the amount of water applied. Irrigation Efficiency is derived from measurements and estimates of irrigation system characteristics and management practices. The minimum Irrigation Efficiency for purposes of this ordinance is 0.625. Greater Irrigation Efficiency can be expected from well-designed and well-maintained systems.

**Landscape Irrigation Audit:** A process to perform site inspection, evaluate irrigation systems, and develop efficient irrigation schedules.

**Landscaped Area:** The entire parcel less the building footprint, driveways, non-irrigated portions of the parking lot, hardscape such as decks and patios, and other non-porous areas. Water features are included in the calculation of the landscaped area. Areas dedicated to edible plants such as orchards or vegetable gardens are not included.

**Lateral Line:** The water delivery pipeline that supplies water from the water source to the valve or outlet.

24. WATER CONSERVATION IN LANDSCAPING (Continued)

**Local Mean Precipitation:** The State Department of Water Resources' 20-year historical rainfall data.

**Main line:** The pressurized pipeline that delivers water from the water source to the valve or outlet.

**Maximum Applied Water Allowance:** For design purposes, the upper limit of annual applied water for the established landscaped area as specified in Section 31-27(c)(2). It is based upon the area's reference Evapotranspiration, the ET Adjustment Factor, and the size of the landscaped area. The Estimated Applied Water Use shall not exceed the Maximum Applied Water allowance (gallons per year).

**Mulch:** Any material such as leaves, bark, straw, or other materials left loose and applied to the soil surface to reduce evaporation.

**Operating Pressure:** The pressure at which a system of sprinklers is designed to operate, usually indicated at base of sprinkler.

**Overspray:** The water which is delivered beyond the landscaped area, wetting pavements, walks, structures, or other non-landscaped areas.

**Plant Factor:** A factor that, when multiplied by reference Evapotranspiration, estimates the amount of water used by plants. For purposes of this ordinance, the average plant factor of low water-using plants ranges from 0 to 0.3; for average water-using plants the range is 0.4 to 0.6, and for high water-using plants the range is 0.7 to 1.0.

**Rain Sensing Device:** A system which automatically shuts off the irrigation system when it rains.

**Recreational Areas:** Areas of active play or recreation, such as sports fields, school yards, picnic grounds, or other areas with intense foot traffic.

**Recycled Water or Reclaimed Water:** Treated or recycled wastewater of a quality suitable for non-potable uses, such as landscape irrigation; not intended for human consumption.

**Reference Evapotranspiration or ETo:** A standard measurement of environmental parameters, which affect the water use of plants. ETo is given in inches per day, month, or year as represented in Section 27. G. (below) and is an estimate of the Evapotranspiration of a large field of 4- to 7-inch tall, cool-season grass that is well watered. Reference Evapotranspiration is the Maximum Applied Water Allowance so that regional differences in climate can be accommodated.

24. WATER CONSERVATION IN LANDSCAPING (Continued)

**Rehabilitated Landscape:** Any re-landscaping project that requires a permit.

**Runoff:** Water which is not absorbed by the soil or landscape to which it is applied and flows from the area. For example, Runoff may result from water that is applied at too great a rate (application rate exceeds Infiltration Rate) or when there is a severe slope.

**Soil Moisture Sensing Device:** A device that measures the amount of water in the soil.

**Soil Texture:** The classification of soil based on the percentage of sand, silt, and clay in the soil.

**Static Water Pressure:** The pipeline or municipal water supply pressure when water is not flowing.

**Station:** An area served by one valve or by a set of valves that operate simultaneously.

**Water Conservation Concept Statement:** A one-page checklist and a narrative summary of the project shown in Exhibit A.

24.D **LANDSCAPE DOCUMENTATION PACKAGE**

24.D.1 A copy of the landscape documentation package conforming to the provisions of these Rules and Regulations shall be submitted to the City. No permit shall be issued until the City reviews and approves the landscape documentation package.

24.D.2 A copy of the approved landscape documentation package shall be provided to the property Owner or site manager along with the record drawings and any other information normally forwarded to the property Owner or site manager.

24.D.3 Each landscape documentation package shall include the following elements, which are described in Subsection (E) of this section:

24.D.3.(a) Water Conservation Concept Statement

24.D.3.(b) Calculation of the Maximum Applied Water Allowance

24.D.3.(c) Calculation of the Estimated Applied Water Use

24. WATER CONSERVATION IN LANDSCAPING (Continued)

- 24.D.3.(d) Calculation of the Estimated Total Water Use
- 24.D.3.(e) Landscape Design Plan
- 24.D.3.(f) Irrigation Design Plan
- 24.D.3.(g) Irrigation Schedule
- 24.D.3.(h) Maintenance Schedule
- 24.D.3.(i) Landscape Irrigation Audit Schedule
- 24.D.3.1(j) Grading Design Plan
- 24.D.3.(k) Soil Analysis
- 24.D.3.(l) Estimated Certificate of Substantial Completion (to be submitted after installation of the project).

- 24.D.4 If effective precipitation is included in the calculation of the Estimated Total Water Use, then an Effective Precipitation Disclosure Statement from the landscape professional and the property Owner shall be submitted with the landscape documentation package.

24.E **ELEMENTS OF LANDSCAPE DOCUMENTATION PACKAGE**

- 24.E.1 Water Conservation Concept Statement. Each landscape documentation package shall include a cover sheet referred to as the Water Conservation Concept Statement similar to the example set forth as Exhibit A below. It serves as a checklist to verify that the elements of the landscape documentation package have been completed and has a narrative summary of the project.

- 24.E.2 The Maximum Applied Water Allowance.

- 24.E.2.(a) A project's Maximum Applied Water Allowance (MAWA) (in gallons per year) shall be calculated using the following formula:

$$\begin{aligned} \text{MAWA} &= \text{ETo} \times 0.8 \times \text{LA} \times 0.62 \text{ where:} \\ \text{ETo} &= \text{Reference Evapotranspiration (inches per year)} \\ 0.8 &= \text{ET Adjustment Factor} \\ \text{LA} &= \text{Landscaped Area} \\ 0.62 &= \text{Conversion Factor (to gallons per square foot)} \end{aligned}$$

24. WATER CONSERVATION IN LANDSCAPING (Continued)

- 24.E.2.(b) Portions of landscaped area in public and private projects such as parks, playgrounds, sports fields, golf courses, or school yards where turf provides a playing surface or serves other recreational purposes may require water in addition to the Maximum Applied Water allowance. A statement shall be included with the landscape design plan, designating areas to be used for such purposes and specifying any needed amount of additional water above the Maximum Applied Water Allowance.

24.E.3 Applied Water Use.

- 24.E.3.(a) The Estimated Applied Water Use shall not exceed the Maximum Applied Water Allowance.
- 24.E.3.(b) A calculation of the Estimated Applied Water Use shall be submitted with the landscape documentation package. It may be calculated by summing the amount of water recommended in the irrigation schedule.

24.E.4 Estimated Total Water Use.

- 24.E.4.(a) A calculation of the Estimated Total Water Use shall be submitted with the landscape documentation package. The Estimated Total Water Use may be calculated by summing the amount of water recommended in the irrigation schedule and adding any amount of water expected from effective precipitation (not to exceed twenty-five percent (25%) of the local annual mean precipitation) or may be calculated from a formula such as the following:
- 24.E.4.(b) The Estimated Total Water Use (EWU) for the entire landscaped area equals the sum of the Estimated Water Use of all Hydrozones in that landscaped area.

$$\text{EWU (hydrozone)} = \frac{\text{ETo} \times \text{PF} \times \text{HA} \times 0.62}{\text{IE}}$$

ETo = Reference Evapotranspiration (inches per year)  
PF = Plant Factor  
HA = Hydrozone Area  
0.62 = Conversion Factor (to gallons per square foot)  
IE = Irrigation Efficiency

24. WATER CONSERVATION IN LANDSCAPING (Continued)

24.E.4.(c) If the Estimated Total Water Use is greater than the Estimated Applied Water Use due to precipitation being included as a source of water, an Effective Precipitation Disclosure Statement such as the one herein shall be included in the landscape documentation package.

24.E.5 Landscape Design Plan. A landscape design plan meeting the following requirements shall be submitted as part of the landscape documentation package.

24.E.5.(a) Plant Selection and Grouping.

24.E.5.(a)(i) Any plants may be used in the landscape, providing the Estimated Applied Water Use recommended does not exceed the Maximum Applied Water allowance and that the plants meet the specifications set forth in (B), and (C) below.

24.E.5.(a)(ii) Plants having similar water use shall be grouped together in district Hydrozones.

24.E.5.(a)(iii) Plants shall be selected appropriately based upon their adaptability to the climatic, geologic, and topographical conditions of the site. Protection and preservation of native species and natural areas are encouraged. The planting of trees is encouraged wherever it is consistent with the other provisions of these Rules and Regulations.

24.E.5.(b) Water Features.

24.E.5.(b)(i) Re-circulating water shall be used for decorative water features.

24.E.5.(b)(ii) Pool and spa covers are encouraged.

24.E.5.(b)(iii) Landscape Design Plan Specifications. The landscape design plan shall be drawn on project base sheets at a scale that accurately and clearly identifies:

(1) Designation of Hydrozones.

(2) Landscape materials, trees, shrubs, ground cover, turf, and other vegetation. Planting symbols shall

24. WATER CONSERVATION IN LANDSCAPING (Continued)

be clearly drawn and plants labeled by botanical name, common name, container size, spacing, and quantities of each group of plants indicated.

- (3) Property lines and street names.
- (4) Streets, driveways, walkways, and other paved areas.
- (5) Pools, ponds, water features, fences, and retaining walls.
- (6) Existing and proposed buildings and structures including elevation if applicable.
- (7) Natural features including but not limited to rock outcroppings, existing trees, and shrubs that will remain.
- (8) Tree staking, plant installation, soil preparation details, and any other applicable planting and installation details.
- (9) A calculation of the total Landscaped Area.
- (10) Designation of Recreational Areas.

24.E.6      Irrigation Design Plan. An irrigation design plan meeting the following conditions shall be submitted as part of the landscape documentation package.

24.E.6.(a) Irrigation Design Criteria.

- 24.E.6.(a)(i)      **Runoff and Overspray.** Soil types and Infiltration Rate shall be considered when designing irrigation systems. All irrigation systems shall be designed to minimize Runoff, low head drainage, Overspray, or other similar conditions where water flows onto adjacent property, non-irrigated areas, walks, roadways, or structures. Proper irrigation equipment and schedules, including features such as repeat cycles, shall be used to closely match Application Rates to Infiltration Rates, therefore minimizing Runoff. Special attention shall be given to minimize



24. WATER CONSERVATION IN LANDSCAPING (Continued)

Runoff on slopes and to avoid Overspray in planting areas with a width less than ten feet and in median strips less than eight feet wide.

24.E.6.(a)(ii) **Irrigation Efficiency.** For the purpose of determining the Maximum Applied Water Allowance, Irrigation Efficiency is assumed to be 0.625. Irrigation systems shall be designed, maintained, and managed to meet or exceed 0.625 efficiency.

24.E.6.(a)(iii)**Equipment.**

**Water meters.** Separate landscape water meters shall be installed for all new construction projects except for single-family homes or any project with a landscaped area of less than 2,500 square feet.

**Controllers.** Automatic control systems shall be required for all irrigation systems and must be able to accommodate all aspects of the design.

**Valves.** Plants which require different amounts of water shall be irrigated by separate valves. If one valve is used for a given area, only plants with similar water use shall be used in that area. Anti-drain (check) valves shall be installed in strategic points to minimize or prevent low-head drainage.

**Sprinkler heads.** Heads and emitters shall have consistent Application Rates within each control valve circuit. Sprinkler heads shall be selected for proper area coverage, application rate, Operating Pressure, adjustment capability, and ease of maintenance.

**Rain sensing override devices.** Rain sensing override devices are recommended on all irrigation systems.

**Soil moisture sensing devices.** It is recommended that soil moisture sensing devices be considered where appropriate.

24.E.6.(b) Recycled Water.

24.E.6.(b)(i) The installation of Recycled Water irrigation systems (dual distribution systems) shall be required to allow

24. WATER CONSERVATION IN LANDSCAPING (Continued)

for the current and future use of Recycled Water, unless a written exemption has been granted as described in the following section (B).

24.E.6.(b)(ii) Irrigation systems shall make use of Recycled Water unless a written exemption has been granted by the City, stating that Recycled Water of appropriate quality not available and will not be available in the foreseeable future.

24.E.6.(b)(iii) The Recycled Water irrigation systems shall be designed and operated in accordance with all City Rules and Regulations.

24.E.6.(c) Irrigation Design Plan Specifications.

24.E.6.(c)(i) Irrigation systems shall be designed to be consistent with Hydrozones.

24.E.6.(c)(ii) The irrigation design plan shall be drawn on project base sheets. It should be separate from, but use the same format as, the landscape design plan. The scale shall be the same as that used for the landscape design plan described above. Specifications should include:

- (1) Location and size of separate water meters for the landscape.
- (2) Location, type, and size of all components of the irrigation system, including automatic controllers, main and lateral lines, valves, sprinkler heads, moisture sensing devices, rain switches, quick couplers, and Backflow Prevention Devices.
- (3) Static water pressure at the Point of Connection to the public water supply.
- (4) Flow Rate (gallons per minute), Application Rate (inches per hour), and design operating pressure (psi) for each station.
- (5) Recycled Water irrigation systems as specified in these Rules and Regulations.

24. WATER CONSERVATION IN LANDSCAPING (Continued)

24.E.7 Irrigation Schedules. Irrigation schedules satisfying the following conditions shall be submitted as part of the landscape documentation package:

24.E.7.(a) An annual irrigation program with monthly irrigation schedules shall be required for the plant establishment period, for the established landscape, and for any temporarily irrigated areas.

24.E.7.(b) The irrigation schedule shall:

24.E.7.(b)(i) Include run time (in minutes per cycle), suggested number of cycles per day, and frequency of irrigation for each station; and

24.E.7.(b)(ii) Provide the amount of Applied Water in hundreds of cubic feet, gallons recommended on a monthly and annual basis.

24.E.7.(c) The total amount of water for the project shall include water designated in the Estimated Total Water Use calculation plus water needed for any water features which shall be considered as a high-water-using Hydrozone.

24.E.7.(d) Recreational Areas designated in the landscape design plan shall be highlighted and the irrigation schedule shall indicate if any additional water is needed above the Maximum Applied Water Allowance because of high Plant Factors (but not due to irrigation inefficiency).

24.E.7.(e) Whenever possible, irrigation scheduling shall incorporate the use of Evapotranspiration data, such as those from the California Irrigation Management Information Systems (CIMIS) weather stations to apply the appropriate levels of water for different climates.

24.E.7.(f) Whenever possible, landscape irrigation shall be scheduled between 6:00 P.M. and 10:00 A.M. to avoid irrigating during times of high wind or high temperatures.

24.E.8 Maintenance Schedules. A regular maintenance schedule satisfying the following conditions shall be submitted as part of the landscape documentation package:

24.E.8.(a) Landscape shall be maintained to ensure water efficiency. A

24. WATER CONSERVATION IN LANDSCAPING (Continued)

regular maintenance schedule shall include but not be limited to checking, adjusting, and repairing irrigation equipment; resetting the automatic controller; aerating and dethatching turf areas; replenishing mulch; fertilizing; pruning; and weeding in all landscaped areas.

24.E.8.(b) Whenever possible, repair of irrigation equipment shall be done with the originally specified materials or their equivalents.

24.E.9 Landscape Irrigation Audit Schedules. A schedule of Landscape Irrigation Audits satisfying the following conditions shall be submitted to the City as part of the landscape documentation package.

24.E.9.(a) At a minimum, audits shall be in accordance with the State of California Landscape Water Management Program as described in the Landscape Irrigation Auditor Handbook, the entire document, which is hereby incorporated by reference. (See *Landscape Irrigation Auditor Handbook, formerly Master Auditor Training, Department of Water Resources, and Water Conservation Office.*)

24.E.9.(b) The schedule shall provide for Landscape Irrigation Audits to be conducted by certified landscape irrigation auditors at least once every five year.

24.E.10 Grading Design Plan. Grading design plans satisfying the following conditions shall be submitted as part of the landscape documentation package:

24.E.10.(a) A grading design plan shall be drawn on project base sheets. It should be separate from but use the same format as the landscape design plan.

24.E.10.(b) The grading design plan shall indicate finished configuration and elevations of the Landscaped Area, including the height of graded slopes, drainage patterns, pad elevations, and finish grade.

24.E.11 Soils.

24.E.11.(a) A soil analysis satisfying the following conditions shall be submitted as part of the landscape documentation package:

24.E.11.(a)(i) Determination of soil texture, indicating the percentage of organic matter.

24. WATER CONSERVATION IN LANDSCAPING (Continued)

24.E.11.(a)(ii) An approximate soil Infiltration Rate (either measured or derived from soil texture/Infiltration Rate tables). A range of Infiltration Rates should be noted where appropriate.

24.E.11.(a)(iii) Measure of pH and total soluble salts.

24.E.11.(b) A Mulch of at least three inches shall be applied to all planting areas except turf.

24.E.12 Certification.

24.E.12.(a) Upon completion of the installation of the landscaping and the irrigation systems, an irrigation audit shall be conducted by a certified landscape irrigation auditor prior to the final field observation. (See *Landscape Irrigation Auditor Handbook, formerly Master Auditor Training, Department of Water Resources, and Water Conservation Office.*)

24.E.12.(b) A licensed landscape architect, irrigation consultant or licensed or certified professional in a related field in horticulture shall conduct a final field observation and shall provide a certificate of substantial completion to the City and to the Owner of record. The certificate shall specifically indicate that plants were installed as specified and that the irrigation system was installed as designed and shown on the plan.

24.E.12.(c) Certification shall be accomplished by completing a Certificate of Substantial Completion and delivering it to the City.

24.F **PROVISIONS FOR EXISTING LANDSCAPES**

**Note:** Water Conservation in Landscaping Act, Gov. Code Section 65591 et seq.

24.F.1 **Water management.** All existing landscaped areas to which the City provides water that are one acre or more, including golf courses, green belts, common areas, multi-family housing, schools, businesses, parks, cemeteries, and publicly owned landscapes shall have a Landscape Irrigation Audit at least every five years. At a minimum, the audit shall be in accordance with the California Landscape Water Management Program as described in the Landscape Irrigation Auditor Handbook, the entire document which is hereby incorporated by this reference. (See *Landscape Irrigation Auditor Handbook (formerly Master Auditor Training), Department of Water Resources, Water Conservation Office.*)

24. WATER CONSERVATION IN LANDSCAPING (Continued)

24.F.1.(a) If the project's water bills indicate that water use is less than or equal to the Maximum Applied Water Allowance for that project site, an audit shall not be required.

24.F.1.(b) Recognition of projects that stay within the Maximum Applied Water Allowance is encouraged.

24.F.2 **Water waste prevention.** Cities shall prevent water waste resulting from inefficient landscape irrigation by promoting the elimination of Runoff, low head drainage, Overspray, or other similar conditions where water flows onto adjacent property, non-irrigated areas, walks, roadways, or structures. Penalties for Violation of these prohibitions shall be established locally.

24.G **EFFECTIVE PRECIPITATION**

If Effective Precipitation is included in the calculation of the Estimated Total Water Use, an Effective Precipitation Disclosure Statement similar to the sample entitled Effective Precipitation Disclosure Statement, as shown below, shall be completed, signed, and submitted with the landscape documentation package. No more than twenty-five percent (25%) of the local annual mean precipitation shall be considered Effective Precipitation in the calculation of the Estimated Total Water Use.

**Reference Evapotranspiration.**

In Inches (Historical Data, Extrapolated from 12-month Normal Year ETo Maps and U.C. Publication 21426)

County	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
Santa Clara	1.5	1.8	3.1	4.1	5.5	5.8	6.5	5.9	5.2	3.3	1.8	1.0	45.3

24. WATER CONSERVATION IN LANDSCAPING (Continued)

EXHIBIT A

WATER CONSERVATION CONCEPT STATEMENT

FC SAMP 2(06-19-92)

Project Site:

Project Number:

Project Location:

Landscape Architect/Irrigation Designer/Contractor:

Included in this project submittal package are (Check ☐ to indicate completion):

- ☐ 1. Maximum Applied Water Allowance: \_\_\_\_\_ Gallons or cubic feet/year  
☐ 2. Estimated Applied Water Use: \_\_\_\_\_ Gallons or cubic feet/year

- ☐ 2a. Estimated Amount of Water Expected from Effective Precipitation: \_\_\_\_\_ Gallons or cubic feet/year

- ☐ 3. Estimated Total Water Use: \_\_\_\_\_ Gallons or cubic feet/year

NOTE: If the design assumes that a part of the Estimated Total Water Use will be provided by precipitation, the Effective Precipitation Disclosure Statement in Section 704 shall be completed and submitted. The Estimated Amount of Water Expected from Effective Precipitation shall not exceed twenty-five percent (25%) of the local annual mean precipitation (average rainfall).

- ☐ 4. Landscape Design Plan

- ☐ 5. Irrigation Design Plan

- ☐ 6. Irrigation Schedule

- ☐ 7. Maintenance Schedule

- ☐ 8. Landscape Irrigation Audit Schedule

- ☐ 9. Grading Design Plan

- ☐ 10. Soil Analysis

Description of Project: Briefly describe the planning and design actions that are intended to achieve conservation and efficiency in water use.

Prepared by: \_\_\_\_\_ Date: \_\_\_\_\_

24. WATER CONSERVATION IN LANDSCAPING (Continued)

EXHIBIT B

**CERTIFICATION OF SUBSTANTIAL COMPLETION**

FC SAMP 1(06-19-92)

Project Site:

Project Number:

Project Location:

Preliminary Project Documentation Submitted: (Check ☐ indicating submittal)

- |                          |     |  |                                  |
|--------------------------|-----|--|----------------------------------|
| <input type="checkbox"/> | 1.  | Maximum Applied Water Allowance:                                 | _____ Gallons or cubic feet/year |
| <input type="checkbox"/> | 2.  | Estimated Applied Water Use:                                     | _____ Gallons or cubic feet/year |
| <input type="checkbox"/> | 2a. | Estimated Amount of Water Expected from Effective Precipitation: | _____ Gallons or cubic feet/year |
| <input type="checkbox"/> | 3.  | Estimated Total Water Use:                                       | _____ Gallons or cubic feet/year |
- NOTE: If the design assumes that a part of the Estimated Total Water Use will be provided by precipitation, the Effective Precipitation Disclosure Statement in Section 704 shall be completed and submitted. The Estimated Amount of Water Expected from Effective Precipitation shall not exceed twenty-five percent (25%) of the local annual mean precipitation (average rainfall).
- |                          |     |                                    |
|--------------------------|-----|------------------------------------|
| <input type="checkbox"/> | 4.  | Landscape Design Plan              |
| <input type="checkbox"/> | 5.  | Irrigation Design Plan             |
| <input type="checkbox"/> | 6.  | Irrigation Schedule                |
| <input type="checkbox"/> | 7.  | Maintenance Schedule               |
| <input type="checkbox"/> | 8.  | LandscapeIrrigation Audit Schedule |
| <input type="checkbox"/> | 9.  | Grading Design Plan                |
| <input type="checkbox"/> | 10. | Soil Analysis                      |



24. WATER CONSERVATION IN LANDSCAPING (Continued)

Post-installation Inspection: (Check ☐ indicating substantial completion)

- ☐ A. Plants installed as specified
- ☐ B. Irrigation system installed as designed
- ☐ dual distribution system for recycled water
- ☐ minimal runoff or overspray
- ☐ C. Landscape Irrigation Audit performed

Project submittal package and a copy of this certification has been provided to property Owner/manager and local water agency.  
Comments:

I/We certify that work has been installed in accordance with the contract documents.

Contractor \_\_\_\_\_

Signature \_\_\_\_\_ Date \_\_\_\_\_ State License Number \_\_\_\_\_

I/We certify that, based upon periodic site observations, the work has been substantially completed in accordance with the Water Efficient Landscape Ordinance and that the landscape planting and irrigation conform with the approved plans and specifications.

Landscape Architect, Irrigation Designer/Contractor or Licensed or Certified Professional in closely related field.

Signature \_\_\_\_\_ Date \_\_\_\_\_ State License Number \_\_\_\_\_

I/We certify that I/we have received all of the contract documents and that it is my/our responsibility to see that the project is maintained in accordance with the contract documents.

Owner \_\_\_\_\_

Signature \_\_\_\_\_ Date \_\_\_\_\_

WATER SERVICE AND USE RULES AND REGULATIONS No. 24

24. WATER CONSERVATION IN LANDSCAPING (Continued)

EXHIBIT C

EFFECTIVE PRECIPITATION DISCLOSURE STATEMENT  
FC SAMP 3(06-19-92)

I certify that I have informed the project owner and developer that this project depends on \_\_\_\_\_ gallons or cubic feet of effective precipitation per year. This represents \_\_\_\_\_ percent of the local mean precipitation of \_\_\_\_\_ inches per year.

I have based my assumptions about the amount of precipitation that is effective upon:

I certify that I have informed the project owner and developer that, in times of drought, there may not be enough water available to keep the entire landscape alive.

Licensed or Certified Landscape Professional

I certify that I have been informed that, in times of drought, there may not be enough water available to keep the entire landscape above.

\_\_\_\_\_  
Owner

\_\_\_\_\_  
Developer

(Ord. No. 1646, 1, 2-25-93)

S:\Attorney\Rules and Regulations\Water Rules and Regs (final 11-3-03).doc